PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS–II

A systematic tabular presentation of accurate data on the physical properties of 476 organic straight-chain compounds compiled by R. R. Dreisbach of the Dow Chemical Co. These comprehensive and basic data were determined for specially prepared high purity compounds. In addition to the precisely measured properties, the author has calculated new values for many constants based upon his new experimental values.



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Introduction

This is a continuation of Mr. Dreisbach's compilation of physical properties of organic compounds. Data on 511 cyclic compounds were published in 1955 as Number 15 of the ADVANCES IN CHEMISTRY SERIES under the title of "Physical Properties of Chemical Compounds." The present volume includes 476 acyclic compounds.

As in the earlier volume, this compilation contains many data not hitherto published. It also includes parameters which can be used for interpolating and extrapolating the determined data for practically all of the compounds listed.

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In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

Physical Properties of Chemical Compounds

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Definition of the Symbols and Parameters Used, with the Methods of Calculating the Parameters

Mol. % Pur.: Mole % purity by weight.

F.P.: Freezing point, °C.

F.P. 100%: Freezing point curve extrapolated to 100% purity.

B.P. 760 mm., 100 mm., etc.: Boiling points at these pressures, °C.

P_{25}: Pressures at 25°C., in mm.

P_e: Pressure corresponding to temperature t_e in mm.

d^{20}, etc.: Density at 20°C., etc., g./ml.

a, b: Constants of Law of Rectilinear Diameters, $d_v + d_L = a + bt$.
d_v = density of the vapor, g./ml.; d_L = density of the liquid, g./ml.

n_D^{20}, etc.: Refractive index for the sodium line at 20°C., etc.

C: Constant of the Eykman equation, $(n_D^2 - 1)/(n_D + 0.4) \times 1/d = C$

MR (obsd.): Molal refraction (obsd.) = $(n_D^2 - 1)/(n_D^2 + 2) \times M/d$ = MR at 20°C. (M = mol. wt.)

MR (calcd.): Molal refraction calculated from atomic refractive indices. See page 8.

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

$(n_D - d/2)$: Refractivity intercept equals refractive index minus one half the density, both at the same temperature, 20°C.

D: Dielectric constant determined at a frequency of 10^5 (cycles/sec.) and at 25°C. unless otherwise noted. When reported as data of The Dow Chemical Co., error about ±0.005. Where Reference 5 is noted it was obtained by squaring the refractive index at 20°C.

A, B, C: Constants of the Antoine vapor pressure equation for the liquid state, giving P (pressure) in mm. and t (temperature) in °C. This is in the range between the temperatures as indicated. These temperatures in general are the boiling point at 30 mm. to a T_R of 0.75 to 0.80. See method of obtaining A, B, C on page 6.

Antoine equation: $\log P = A - B/(t + C)$.

A^*, B^*, K, c, t_k, t_x: Constants of the saturated vapor density equation

$\log d_v(\text{g./ml.}) = A^* - B^*/(t + C)$ to the temperature t_k.

$\log d_v(\text{g./ml.}) = A^* - B^*/(t + C) + K/(1.1\ T_c - 273.2 - t) + c$

from temperature t_k to a reduced temperature, T_R, of 0.92

t_k = Temperature at which it is necessary to change from the simple vapor density equation to the corrected vapor density equation in the higher ranges, °C.

$t_k = t_x + K/c$ and $t_x = (1.1\ T_c - 273.2)$°C.

A^* and B^* where the latent heat at the atmospheric boiling point is available.

$V_g - V_L = (31381.7 \times \Delta Hv \times dt/dp)/T$

Where the latent heat is not available use

$M(\Delta Hv)/T_B = 21.0$ and from this $\Delta Hv = (T_B \times 21.0)/M$

The value 21.0 (or any other value as 21.4 say) is obtained from the nearest related compound which has a latent heat available. Then proceed as in case where latent heat is available for Vg value at B.P.

Since $d_v = 1/Vg$

$\log d_{v760} = A^* - B^*/(t_B + C)$ at 760 mm.

$\log d_{v30} = A^* - B^*/(t_{30} + C)$ at 30 mm.

Solve for A^*, B^*, since t and d_v at 760 mm. and 30 mm. and C are known.

A', B', C': Constants of the Antoine vapor pressure equation below 30 mm. pressure, covering the temperature range as indicated. See method of obtaining the constants on page 6.

A'^*, B'^*: Constants of the vapor density equation below 30 mm. These two values are obtained by using the boiling point at 30 mm. and the pressure at 25°C. (obtained from the values A', B', C') and assuming that at 25°C. the relationship $PV/RT = 1$.

Then we have Vg at 25°C. $= RT/MP = 62,361 \times (25 + 273.2)/MP$.

Then $dv = 1/Vg$. Inserting these values of vapor density we then solve the two equations for the values of A'^* and B'^* as in the case of A^* and B^*.

Ac, Bc, Cc: Constants of the Antoine vapor pressure equation for the liquid state from $T_R = 0.75$ (or a higher T_R as indicated) to the critical temperature. See method of obtaining the constants on page 7.

Cryoscopic Constants, $A°$, $B°$: Cryoscopic constants for calculating mole % purity. See *J. Research Natl. Bur. Standards*, **35** (1945); RP 1676.

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t_e °C.: Temperature at which a mole of the vapor occupies 22.414 liters and the vapor is in equilibrium with the liquid, in °C.

$$te = \frac{B^*}{(A^* - \log dv_e)} - C$$

dt/dp: Rate of change of boiling point with pressure, given by equation $dt/dp = B/(2.3026 \times P \times (A - \log P)^2)$ °C./mm. Also $dt/dp = (t + C)^2/2.3\ PB$

ΔHm: Latent heat of fusion in cal./g.

ΔHv: Latent heat of vaporization at the temperature designated, cal./g.

$t_e(d, e)$: The latent heat of vaporization at temperature t_e as given by the equation $\Delta H_v = d - et$, indicates the accuracy of this equation at temperature t_e.

$\Delta H_v/T_e$: Molal latent heat of vaporization at t_e divided by T_e. (Equal to the mola entropy of vaporization at t_e.)

$d, e; d', e'$: These are parameters of the latent heat of vaporization equation. ΔHv(cal./g.) $= d - et$. This is valid between the temperatures indicated. It has been found that the latent heat between the boiling point at 30 mm. and the boiling point at 760 mm. is almost a linear function of the temperature. As seen in most cases, this equation holds almost to temperature t_e. Above and below this the latent heat is not linear with temperature except for short intervals.

d_c: Critical density, g./ml.

v_c: Critical volume, ml./g.

t_c: Critical temperature, °C. See also page 7.

P_c mm.: Critical pressure in mm. Where this was not obtained from the literature it is calculated as follows (The Thomson method, private communication from George W. Thomson): The critical temperature is inserted in the Antoine equation, using the A, B, and C values to calculate the critical pressure.
This value is too low. This is then multiplied by 1.07 and is assumed to be the critical pressure. In the great majority of cases, this will agree with determined values to within ±3%. For high boiling compounds this value must be decreased, since in most cases there is somewhat irregular drift with increasing temperature, so this should be continually lowered as the boiling point becomes increasingly higher.

PV/RT: Compressibility at the temperature designated.

$z = PV/RT$

where P = pressure in mm., V = volume in ml./mole, and R = 62361.

ΔHc: Heat of combustion, kcal./mole, gas at constant pressure, 298.16°K. or 25°C.

ΔHf: Heat of formation, kcal./mole, liquid at 298.16°K. or 25°C.

ΔFf: Free energy of formation, kcal./mole, liquid at 298.16°K. or 25°C.

η: Kinematic viscosity in centistokes, at temperature designated. The kinematic viscosity is given by the equation

$\log \eta = A^v + B^v/T$

between the temperatures indicated to an accuracy of 1% or better.

B.P., °C., 30 mm.; dt/dp; ΔHv; PV/RT: These values at 30 mm. are calculated from the Antoine equation using A, B, and C. It has been found that at 30 mm. in almost all Cox chart families the ratio PV/RT is negligibly different from one. This, then, has been taken as one point (the other point being the B.P. at 760 mm.) from which to calculate A^* and B^*, always assuming the compressibility as 1.0000 at 30 mm.

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c_p: Specific heat at constant pressure at temperature designated, cal./g. °K.

c_v: Specific heat at constant volume at temperature designated, cal./g. °K.

f, g, h, f', g', h': Parameters of the heat capacity equation for the liquid for the temperature ranges designated, °K.
$c_p(\text{liquid}) = f + gT + hT^2$

m, n, o, m', n', o': Parameters of the heat capacity equation for the vapor for the temperature ranges designated, °K.
$c_p(\text{vapor}) = m + nT + oT^2$

γ: Surface tension in dynes/cm., at temperature designated.

$[P]$: Parachor at the temperature designated:
$M(\gamma)^{1/4}/(d_L - d_v) = [P]$

$[P]$ Sugd.: Parachor from atomic and structural values as given by Sugden. See table. The parachor value for oxygen as hydroxyl (alcohols) in these tables is taken as 15. Sugden gives the values of 20 for oxygen and 30 for oxygen in esters, which does not seem to work for alcohols and phenols.

Exp. L.l.; Exp. L.u.: Explosion limits lower and upper range, % by wt.

Dispersion: Specific dispersion, $10^4(n_F - n_c)/d$, ml./g. at 25°C.
n_F, n_c = refractive index for F and C lines.
d = density, g./ml.

Flash and Fire Points, °C.: Cleveland open cup (ASTM D 92-46) if not otherwise designated. Closed cup (ASTM D 56-36) will be designated as such.

M Spec.: Mass Spectrograph.

Ultra V.: Ultraviolet.

X-Ray Dif.: X-Ray Diffraction.

Infrared: Infrared Spectrograph.

Solubility at 25°C., in solvents as designated.

Explanation of the methods used for calculating the various parameters in the foregoing:

A, B, C: The A, B, and C constants, except where given by the API reports, are calculated by means of the Thomson method [*Chem. Revs.* **38,** 1–39 (1946)] using the determined boiling points at three different pressures. The three formulas for this are as follows:
$(y_3 - y_2)/(y_2 - y_1)\cdot(t_2 - t_1)/(t_3 - t_2) = 1 - (t_3 - t_1)/(t_3 + C)$
$B = (y_3 - y_1)/(t_3 - t_1)\cdot(t_1 + C)(t_3 + C)$
and $A = y_1 + B/(t_1 + C)$
where y_1, y_2, and y_3 are equal to log P_1, log P_2, and log P_3 at temperatures t_1, t_2, and t_3. Unless the data for the three points are *very* accurate, the C value can be considerably in error. As a check on this method an empirical formula developed by Thomson (private communication from George W. Thomson) will give a much better value of C if the data are much in error. This formula is $C = 239 - 0.19t_B$. The A and B values can then be readily determined from the two points given, since they are much less critical.

A', B', C' (for pressures below 30 mm.): Applicable when molar heats of vaporization are available at 25°C. and the Antoine equation can be used to obtain the boiling point at 30 mm. Let A, B, C be the constants of the usual Antoine equation valid above 30 mm. and let A', B', C' be the constants of the Antoine equation sought for below 30 mm. These two equations are taken to give the same value of the pressure-temperature slope at 30 mm.
$\log 30 = A - B/(t_1 + C) = A' - B'/(t_1 + C')$
$B/(t_1 + C)^2 = B'/(t_1 + C')^2$

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Since PV/RT may be assumed to be 1.0000 at t_1, the temperature corresponding to 30 mm., and is also 1.0000 at 25°C., the molar heat of vaporization at 25°C., $M\Delta Hv_2$ is given by
$M\Delta Hv_2 = 2.3026\ RB'\ [(t_2 + 273.2)/(t_2 + C')]^2$
where $t_2 = 25$°C. To solve for A', B', C' let
$g_2 = M\Delta Hv_2/2.3026\ R(t_2 + 273.2)^2 = M\Delta Hv_2/406883$ if $t_2 = 25$°C.

Since t_1, t_2, and all values on left-hand side of equations above are known, then B' and C' are readily obtained as follows:
$[B'/(t_2 + C')^2][(t_1 + C')^2B'] = g_2(t_1 + C')^2/B' =$ say, h^2
Then $C' = (t_1 - ht_2)/(h - 1)$ and $B' = g_2(t_2 + C')^2$
Also $B' = B[(t_1 + C')/(t_1 + C)]^2$
$A' = \log 30 + B'/(t_1 + C')$ since $P_1 = 30$ mm.
These formulas were developed with the aid of George Thomson.

When heats of vaporization at 25°C. are not known:

In this case the C' value is estimated and A' and B' are calculated from known data. It was noticed that C' has a value approximately 18 higher than C when latent heats at 25°C. are known. By adding this increment to C we have C', then B' from the relation for the first case
$B' = B[(t_{30} + C')/(t_{30} + C)]^2$
and then A' as in first case.
In the case of the alkenes and alkynes the A', B', C' and A'^*, B'^* were not calculated by the above method, since the data for these compounds is much less reliable than in the case of the alkanes.

Ac, Bc, Cc: This method was developed by George Thomson [*Chem. Revs.* **38,** No. 1, 23 (1946)] and is similar to the one for obtaining A', B', C'. It is assumed that parameters A, B, C of the Antoine equation are good to a T_R 0.75 or a higher reduced temperature, and this temperature corresponds to the 25°C. in the case of A', B', C', and the critical point corresponds to the 30-mm. point.
$B/(t_1 + C)^2 \times (t_c - t_1)/(y_c - y_1) = 1 + (t_c - t_1)/(t_1 + Cc)$
and $Bc = (y_c - y_1)/(t_c - t_1) \times (t_1 + Cc)(t_c + Cc)(t_c + C_c)$; $Ac = B/t_c + C_c + y_c$
where t_1 °C. $= T_R$ 0.75, t_c °C. = critical temperature
$y_1 = \log P$ at t_1, $y_c = \log P_c$
The first equation is used to evaluate Cc, the second, Bc, and the third, Ac.

Association: The association in the vapor phase of organic acids seems to vary inversely as the temperature for some acids, at least for part of the range. In part of the range, and also apparently for some acids over the whole range, the association is fairly constant. The association is given in these sheets by the formula $M_x = p - rt$. For instance, for acetic acid this formula would be $M_x = 2.225 - 0.004085\ t$ from 0° to 100°C. From 100°C. to a T_R of 0.92, $M_x = 1.85$. That is to say, the vapor density as calculated by the A^*, B^* formula would have to be multiplied by this correction factor to take care of the association. Further, if the reciprocal of the density is used as calculated to give vapor volume, it would be necessary to divide by 1.85 to get the actual vapor volume.

t_c: Where the critical temperature has not been determined, it is calculated by Watson's equation:
$T_s/T_c = 0.283\ (M/d_s)^{0.18}$
where d_s = liquid density, g./ml. at the boiling point, and M = molecular weight. This is used for all hydrocarbons and halohydrocarbons.

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f, g, h, m, n, o, etc.: For a short temperature range the equation $C_p = f + gT + hT^2$ reproduces almost exactly determined data. The parameters were set up on the IBM machines using eight determined values where that many or more were available.

The IBM machines were used to set up the Antoine constants from determined data. A preliminary C value was obtained from the equation $C = 239. - 0.19t_B$. A and B were then obtained and new C values either side of the first C used and new A and B values found. In each case above, the boiling points at the experimental pressures were calculated and compared with the determined boiling points.
Actually the value of C was generally obtained from $C = 239. - 0.19t_B$, since the determined values must be *very very* accurate to give better values of C.

Cox Chart Families

1. Alkanes
2. Haloalkanes
3. Alkenes
4. Haloalkenes
5. Diolefins
6. Alkynes

Atomic Refractive Indices Used for Computing Molecular Refractive Index

All values are for the sodium line.

Atom	Value
Carbon singly bound and alone	2.592
Carbon singly bound	2.418
Carbon double bond	1.733
Carbon triple bond	2.398
Carbon conjugated	1.27
Hydrogen	1.100
Oxygen—hydroxyl	1.525
Oxygen—ethereal	1.643
Oxygen—ketonic	2.211
Oxygen—as ester	1.64
Sulfur—as SH	7.69
Sulfur—as RSR	7.97
Sulfur—as RCNS	7.91
Sulfur—as RSSR	8.11
Nitrogen	
As aliphatic primary amine	2.45
As aromatic primary amine	3.21
As aliphatic secondary amine	2.65
As aromatic secondary amine	3.59
As aliphatic tertiary amine	3.00
As aromatic tertiary amine	4.36
As hydroxylamine	2.48
As hydrazine	2.47
As aliphatic cyanide	3.05
As aromatic cyanide	3.79
As aliphatic oxime	3.93
As primary amide	2.65
As secondary amide	2.27
As tertiary amide	2.71
NO as nitrites	5.91
NO as nitrosoamine	5.37
NO_2 as alkyl nitrite	7.44
NO_2 as alkyl nitrate	7.59
NO_2 as nitroparaffin	6.72
NO_2 as nitro aromatic	7.30
NO_2 as nitramine	7.51
Fluorine	0.95*
Chlorine	5.967
Bromine	8.865
Iodine	13.900

* This value for one fluorine atom attached to carbon. The value 1.1 is to be used for each fluorine atom in polyfluorides.

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Atomic and Structural Constants for Calculation of Parachor

	Sugden
CH_2	39.0
C	4.8
H	17.1
O	20.0
O (Alcohol)	15.0
O_2 (Ester)	60.0
N	12.5
N (nitrile)	14.4
S	48.2
F	25.7
Cl	54.3
Br	68.0
I	91.0
Single bond	..
Double bond	23.2
Triple bond	46.6
3-membered ring	16.7
4-membered ring	11.6
5-membered ring	8.5
6-membered ring	6.1
7-membered ring	..
Aliphatic alcohol . . . subtract	6.0

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No. 1

NAME	Methane	STRUCTURAL FORMULA
		CH_4

Mole % Pur.	Ref.	Molecular Formula CH_4	Molecular Weight 16.042

		Ref.
F.P. °C	-182.48	2
F.P. 100%		
B.P. °C		
760 mm	-161.49	2
100	-181.45	2
30	-190.	4
10	-195.51≠	2
1	-207.0	5
Pressure mm -140°C	3289.7	5
t_e	272.1	5
Density g/ml -160°C	0.4222	3
d^t_4 -150	0.4075	3
-140	0.3916	3
a -160°C	0.4242	3
b	-0.00126	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	6.818	5
Dielectric		
A -180 to	6.61184	2
B °C	389.93	2
C	266.00	2
A* -165 to	0.74077	4
B* -130 °C	362.78	4
K	7.79	4
c	-0.15125	4
t_k -130 to		
t_x -100 °C	-63.0	5
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°	0.0138	2
consts. B°	0.0057	2
t_e °C	-172.65	4

		Ref.
dt/dP °C/mm		
-140°C	0.00537	5
BP	0.0160	2
t_e	0.3567	5
30 mm	0.2141	4
ΔHm cal/g	14.025	2
ΔHv cal/g		
-140°C	115.67	3
30 mm	133.34	5
BP	121.87	2
t_e	125.30	5
t_e (d, e)	126.36	5
ΔHv/T_e	19.99	5
d -190 to	56.90	5
e -160 °C	0.4023	5
d' to		
e' °C		
d_c g/ml	0.162	2
v_c ml/g	6.17	2
t_c °C	-82.5	2
P_c mm	34808.	2
PV/RT		
-140°C	0.9208	4
30 mm	1.0000	5
BP	0.9628	4
t_e	0.9726	5
t_c	0.290	2
ΔHc kcal/m	191.76	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -180 °C	0.418	2
-175	0.364	2
-170	0.325	2
-165	0.295	2
B^v -180 to	101.76	4
A^v -160 °C	$\bar{1}$.52937	4
(B^v) to		
(A^v) °C		
c_p liq. 300 °K	0.53310	2
400	0.60691	2
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.1259	4
n 600 °K	0.0015	4
o	$0.0_{6}66$	4
m' 700 to	0.1408	4
n' 1000 °K	0.0013	4
o'	$-0.0_{6}34$	4
Surface tension dynes/cm. γ -180°C	18.0	2
-170	15.8	2
-160	13.7#	2
Parachor [P] 20°C		
30		
40		
Sugd.	73.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ solid # at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Young

No. 2

NAME	Ethane	STRUCTURAL FORMULA
		CH_3CH_3
Mole % Pur.	Ref.	Molecular Formula C_2H_6 / Molecular Weight 30.068

Property	Value	Ref.
F.P. °C	-183.27≠	2
F.P. 100%		
B.P. °C 760 mm	-88.63	2
100	-119.33	2
30	-132.74	4
10	-142.88	5
1	-159.51	5
Pressure mm 25°C	29290.	5
t_e	480.9	5
Density g/ml-60°C	0.509	3
d^t_4 20	0.363	3
30	0.30	3
a	0.364	4
b	-0.0363	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A -132 to	6.80266	2
B -44 °C	656.40	2
C	256.00	2
A* -132 to	0.98156	5
B* -90 °C	613.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac -44 to	7.67290	5
Bc t_c °C	1096.9	5
Cc	320.54	5
Cryos. consts. A°	0.04256	2
B°	0.0095	2
t_e °C	-96.7	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.00213	5
BP	0.0244	2
t_e	0.0351	5
30 mm	0.3350	5
ΔHm cal/g	22.728	2
ΔHv cal/g 25°C	76.86	5
30 mm	129.71	5
BP	116.97	2
t_e	119.45	5
t_e (d, e)	119.33	5
ΔHv/T_e	20.36	5
d -132 to	91.37	5
e -90 °C	0.2888	5
d' to		
e' °C		
d_c g/ml	0.203	2
v_c ml/g	4.92	2
t_c °C	32.27	2
P_c mm	36632.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9622	5
t_e	0.9735	5
t_c	0.288	2
ΔHc kcal/m	341.26	2
ΔHf		
ΔFf		
Viscosity centistokes η -120 °C	0.438	2
-110	0.387	2
-100	0.348	2
-90	0.314	2
B^v -130 to	135.71	4
A^v -80 °C	2.75615	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.41225	2
400	0.52148	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ -110°C	19.57	2
-100	17.93	2
-90	16.31	2
Parachor [P] 20°C		
30		
40		
Sugd.	112.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Young

No. 3

NAME	Propane	STRUCTURAL FORMULA
		CH_3-CH_2-CH_3
Mole % Pur. / Ref.	Molecular Formula C_3H_8	Molecular Weight 44.094

		Ref.
F.P. °C	-187.69	2
F.P. 100%		
B.P. °C 760 mm	-42.07	2
100	-79.63	2
30	-96.07	4
10	-108.5	4
1	-129.	5
Pressure mm 25°C	7095.	4
t_e	608.5	4
Density g/ml 20°C	0.5005≠	2
d^t_4 25	0.4928≠	2
30	0.4861	4
a	0.5375	4
b	$-0.0_{3}99$	4
Ref. Index n_D 20°C	1.2898	5
25		
30		
"C"	0.766	5
MR (Obs.)		
MR (Calc.)	16.054	5
(nD-d/2)	1.04	5
Dielectric	1.66	5
A -130 to	6.82973	2
B 5 °C	813.200	2
C	248.00	2
A* -100 to	1.05579	5
B* -40 °C	756.21	5
K	17.62	4
c	-0.13012	4
t_k -40 to		
t_x 65 °C	134.0	5
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 5 to	7.33829	4
Bc t_c °C	1090.0	4
Cc	287.8	4
Cryos. A°	0.05802	2
consts. B°	0.0073	2
t_e °C	-46.98	5

		Ref.
dt/dP °C/mm 25°C	0.00561	4
BP	0.0298	2
t_e	0.0355	5
30 mm	0.4109	4
ΔHm cal/g	19.10	2
ΔHv cal/g 25°C	81.76	4
30 mm	114.70	5
BP	101.76	2
t_e	102.98	5
t_e (d, e)	102.94	5
ΔHv/T_e	20.07	5
d -100 to	91.68	5
e -45 °C	0.2396	5
d' to		
e' °C		
d_c g/ml	0.220	2
v_c ml/g	4.358	2
t_c °C	96.8	2
P_c mm	31928.	2
PV/RT 25°C	0.8461	4
30 mm	1.0000	5
BP	0.9612	4
t_e	0.9669	5
t_c	0.278	2
ΔHc kcal/m	488.53	2
ΔHf	-28.643	2
ΔFf		
Viscosity centistokes η -80 °C	0.524	2
-70	0.470	2
-60	0.425	2
-50	0.387	2
B^v -85 to	190.47	4
A^v -30 °C	$\bar{1}.73347$	4
(B^v) -140 to	184.09	4
(A^v) -85 °C	$\bar{1}.76598$	4
c_p liq. °K		
c_p vap 300°K	0.40051	2
400	0.51118	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0169	4
n 600 °K	0.0014	4
o	$-0.0_{6}43$	4
m' 700 to	0.0960	4
n' 1000 °K	0.0012	4
o'	$-0.0_{6}40$	4
Surface tension dynes/cm. γ -70°C	19.2	2
-60	17.85	2
-50	16.49	2
Parachor [P] 20°C		
30		
40		
Sugd.	151.2	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		
Viscosity centistokes η -130°C	1.126	2
-90	0.590	2
-40	0.355	2

T_R = 0.75 T_C ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	n-Butane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3CH_2CH_2CH_3$
Molecular Formula	C_4H_{10}	
Molecular Weight	58.120	

Property	Value	Ref.
F.P. °C	-138.350	2
F.P. 100%		
B.P. °C 760 mm	-0.50	2
100	-44.17	2
30	-63.30	4
10	-77.76	4
1	-101.5	5
Pressure mm 25°C	1823.	4
t_e	724.6	5
Density g/ml 20°C	0.5788≠	2
d^t_4 25	0.5730≠	2
30	0.5671	4
a	0.6039	4
b	-0.0_399	4
Ref. Index n_D 20°C	1.3326≠	2
25	1.3292≠	2
30	1.3252	5
"C"	0.7730	4
MR (Obs.)	20.63≠	2
MR (Calc.)	20.772	5
(nD-d/2)	1.0432≠	2
Dielectric	1.776	5
A -60 to 45 °C	6.83029	2
B	945.9	2
C	240.0	2
A* -60 to 30 °C	1.11497	5
B*	881.81	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 45 to t_c °C	7.39949	4
Bc	1299.	4
Cc	289.1	4
Cryos. consts. A°	0.03085	2
B°	0.0048	2
t_e °C	-1.75	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.01768	4
BP	0.03465	2
t_e	0.03597	5
30 mm	0.4778	4
ΔHm cal/g	19.167	2
ΔHv cal/g 25°C	86.63	2
30 mm	105.08	5
BP	92.09	2
t_e	92.35	5
t_e (d, e)	92.35	5
ΔHv/T_e	19.77	5
d -60 to 0 °C	91.99	5
e	0.2069	5
d' 0 to 30 °C	91.98	4
e'	0.2228	4
d_c g/ml	0.228	2
v_c ml/g	4.387	2
t_c °C	152.01	2
P_c mm	28477.	2
PV/RT 25°C	0.9286	4
30 mm	1.0000	5
BP	0.9582	4
t_e	0.9595	5
t_c	0.274	2
ΔHc kcal/m	635.05	2
ΔHf	-35.29	2
ΔFf		
Viscosity centistokes η -40 °C	0.491	2
-30	0.446	2
-20	0.407	2
-10	0.375	2
B^v -40 to 10 °C	234.16	4
A^v	$\bar{2}$.68698	4
(B^v) -100 to -40 °C	227.42	4
(A^v)	$\bar{2}$.71750	4
c_p liq. °K		
c_p vap. 300°K	0.40261	2
400	0.50929	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0351	4
n	0.0013	4
o	-0.0_640	4
m' 700 to 1000 °K	0.0974	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ -30°C	18.43	2
-20	17.22	2
-10	16.02	2
Parachor [P] 20°C		
30		
40		
Sugd.	190.2	4
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C	-60.	3
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		
Viscosity centistokes η -90°C	0.91	2
-50	0.545	2
0	0.350	2

≠ at saturation pressure $T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NFPA 325

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 5

NAME	2-Methylpropane Isobutane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_4H_{10}	Molecular Weight 58.120	CH_3CH-CH_3 CH_3

Property	Value	Ref.
F.P. °C	-159.600	2
F.P. 100%		
B.P. °C 760 mm	-11.730	2
100	-54.07	2
30	-72.52	4
10	-86.4	4
1	-109.2	5
Pressure mm 25°C	2611.	4
t_e	697.	5
Density g/ml 20°C (d^t_4)	0.5572≠	2
25	0.5510≠	2
30	0.5450	4
a	0.5846	4
b	-0.0₃98	4
Ref. Index n_D 20°C	1.3169	5
25		
30		
"C"	0.7675	5
MR (Obs.)		
MR (Calc.)	20.772	5
(nD-d/2)		
Dielectric	1.734	5
A -75 to 30 °C	6.74808	2
B	882.80	2
C	240.00	2
A* -75 to 0 °C	1.04221	5
B*	820.37	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 30 to t_c °C	7.42067	4
Bc	1288.1	4
Cc	296.7	4
Cryos. consts. A°	0.04234	2
B°	0.0057	2
t_e °C	-13.90	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0132	5
BP	0.0337	2
t_e	0.0361	5
30 mm	0.4600	4
ΔHm cal/g	18.668	2
ΔHv cal/g 25°C	78.63	2
30 mm	99.79	5
BP	87.56	2
t_e	87.99	5
t_e (d, e)	88.00	5
ΔHv/T_e	19.72	5
d -75 to -10 °C	85.20	5
e	0.2011	5
d' -10 to 25 °C	84.71	4
e'	0.2431	4
d_c g/ml	0.221	2
v_c ml/g	4.525	2
t_c °C	134.98	2
P_c mm	27360.	2
PV/RT 25°C	0.9083	5
30 mm	1.0000	5
BP	0.9648	4
t_e	0.9668	5
t_c	0.283	2
ΔHc kcal/m	633.05	2
ΔHf	-37.87	2
ΔFf		
Viscosity centistokes η -50 °C	0.619	2
-40	0.549	2
-30	0.491	2
-20	0.443	2
B^v -90 to -55 °C	265.10	4
A^v	$\bar{2}$.6035	4
(B^v) -55 to 0 °C	273.73	4
(A^v)	$\bar{2}$.5653	4
c_p liq. °K		
c_p vap. 300°K	0.40003	2
400	0.51222	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	-0.0058	4
n	0.0015	4
o	-0.0₆58	4
m' 700 to 1000 °K	0.0920	4
n'	0.0013	4
o'	-0.0₆41	4
Surface tension dynes/cm. γ -40°C	17.68	2
-30	16.48	2
-20	15.28	2
Parachor [P] 20°C		
30		
40		
Sugd.	190.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C	-87.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		
Viscosity centistokes η -80°C	0.946	2
-60	0.703	2
-10	0.403	2

≠ at saturation pressure $T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 6

NAME	n-Pentane			STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 2	Molecular Formula C_5H_{12}	Molecular Weight 72.146	$CH_3(CH_2)_3CH_3$

		Ref.
F.P. °C	-129.721	2
F.P. 100%		
B.P. °C 760 mm	36.074	2
100	-12.59	2
30	-33.93	4
10	-50.1	4
1	-76.63	5
Pressure mm 25°C	512.5	4
t_e	825.9	5
Density g/ml 20°C	0.62624	2
d^t_4 25	0.62139	2
30	0.61649	4
a	0.64604	4
b	-0.0_3904	4
Ref. Index n_D 20°C	1.35748	2
25	1.35472	2
30	1.35194	4
"C"	0.7664	4
MR (Obs.)	25.266	2
MR (Calc.)	25.29	5
(nD-d/2)	1.04436	2
Dielectric	1.843	5
A -35 to 80 °C	6.85221	2
B	1064.63	2
C	232.0	2
A* -35 to 60 °C	1.18695	5
B*	995.37	5
K	24.0	4
c	-0.16075	4
t_k 60 to 160 °C	185.	4
t_x	243.6	5
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 80 to t_c °C	7.37001	5
Bc	1411.3	5
Cc	279.1	5
Cryos. consts. A°	0.04906	2
B°	0.0042	2
t_e °C	38.54	5

		Ref.
dt/dP °C/mm 25°C	0.05257	4
BP	0.03856	2
t_e	0.03631	5
30 mm	0.5334	4
ΔHm cal/g	27.805	2
ΔHv cal/g 25°C	87.54	2
30 mm	98.53	5
BP	85.38	2
t_e	84.92	5
t_e (d,e)	84.92	5
ΔHv/T_e	19.65	5
d -35 to 40 °C	92.16	5
e	0.1879	5
d' to °C		
e'		
d_c g/ml	0.232	2
v_c ml/g	4.311	2
t_c °C	196.62	2
P_c mm	25316.	2
PV/RT 25°C	0.9662	5
30 mm	1.0000	5
BP	0.9547	4
t_e	0.9523	5
t_c	0.268	2
ΔHc kcal/m	782.04	2
ΔHf	-41.36	2
ΔFf	-2.25	2
Viscosity centistokes η 0 °C	0.432	2
10	0.401	2
20	0.375	2
30	0.351	2
B^v -10 to 40 °C	251.11	4
A^v	$\bar{2}.71711$	4
(B^v) -70 to	261.39	4
(A^v) -10 °C	$\bar{2}.67863$	4
c_p liq. °K		
c_p vap. 300°K	0.40016	2
400	0.50633	2
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0310	4
n	0.0014	4
o	-0.0_642	4
m' 700 to 1000 °K	0.0976	4
n'	0.0012	4
o'	-0.0_641	4
Surface tension dynes/cm. γ 20°C	16.00	2
30	14.95	2
40	13.87	2
Parachor [P] 20°C	231.0	4
30	231.0	4
40	230.5	4
Sugd.	229.2	5
Exp. L.1.%/wt.	3.6	3
u.	18.6	3
Dispersion	98.0	2
Flash Point °C	-40.0	3
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	727.	1
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		
Viscosity centistokes η -60°C	0.803	2
-20	0.514	2
-10	0.469	2

$T_R = 0.75\,T_c$ ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NFPA 325

No. 7

NAME	2-Methylbutane	STRUCTURAL FORMULA
	Isopentane	$CH_3CHCH_2CH_3$ (with CH_3 on the second carbon)
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_5H_{12}	Molecular Weight 72.146

Property	Value	Ref.
F.P. °C	-159.900	2
F.P. 100%		
B.P. °C 760 mm	27.852	2
100	-20.14	2
30	-41.10	4
10	-56.9	4
1	-82.8	5
Pressure mm 25°C	688.1	4
t_e	793.8	5
Density g/ml 20°C	0.61967	2
d_4^t 25	0.61462	2
30	0.60951	4
a	0.64050	4
b	-0.0₃92	4
Ref. Index n_D 20°C	1.35373	2
25	1.35088	2
30	1.34762	4
"C"	0.7661	4
MR (Obs.)	25.292	2
MR (Calc.)	25.290	5
(nD-d/2)	1.04390	2
Dielectric	1.843≠	3
A -45 to 75 °C	6.78967	2
B	1020.012	2
C	233.097	2
A* -45 to 40 °C	1.15247	5
B*	955.73	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 75 to t_c °C	7.25632	5
Bc	1325.2	5
Cc	275.8	5
Cryos. consts. A°	0.04829	2
B°	0.0058	2
t_e °C	29.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0412	4
BP	0.03815	2
t_e	0.0369	5
30 mm	0.5232	4
ΔHm cal/g	17.063	2
ΔHv cal/g 25°C	81.47	2
30 mm	94.54	5
BP	80.97	2
t_e	80.73	5
t_e (d, e)	80.72	5
ΔHv/T_e	19.27	5
d -40 to 30 °C	86.45	5
e	0.1968	5
d' to °C		
e'		
d_c g/ml	0.234	2
v_c ml/g	4.269	2
t_c °C	187.8	2
P_c mm	25004.	2
PV/RT 25°C	0.9478	5
30 mm	1.0000	5
BP	0.9452	4
t_e	0.9438	5
t_c	0.269	2
ΔHc kcal/m	780.12	2
ΔHf	-42.85	2
ΔFf	-3.59	2
Viscosity centistokes η -10 °C	0.479	2
0	0.434	2
10	0.396	2
20	0.364	2
B^v -10 to 30 °C	305.9	4
A^v	$\bar{2}$.51761	4
(B^v) -40 to -10 °C	326.2	4
(A^v)	$\bar{2}$.55042	4
c_p liq. °K		
c_p vap. 300°K	0.39559	2
400	0.50578	2
c_v vap.		

Property	Range	Value	Ref.
f	to °K		
g			
h			
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0043	4
n		0.0015	4
o		-0.0₆51	4
m'	700 to 1000 °K	0.1052	4
n'		0.0012	4
o'		-0.0₆39	4
Surface tension dynes/cm. γ 20°C		15.00	2
30		13.93#	2
40		12.73	5
Parachor [P] 20°C		230.0	4
30		229.9	4
40			
Sugd.		229.2	5
Exp. L. 1. %/wt. u.			
Dispersion		98.6	2
Flash Point °C		-60.	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in + Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes η -50°C		0.790	2
-20		0.535	2
30		0.337	2

T_R = 0.75 T_c ≠ 20°C # at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

No. 8

NAME	2,2-Dimethylpropane	STRUCTURAL FORMULA
	Neopentane	CH_3 CH_3CCH_3 CH_3

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_5H_{12}	72.146

		Ref.
F.P. °C	-16.550	2
F.P. 100%		
B.P. °C 760 mm	9.503	2
100	-36.32	2
30	-56.27	4
10	-71.3	4
1	-95.9	5
Pressure mm 25°C	1285.2	4
t_e	750.8	5
Density g/ml 20°C	0.5910≠	2
d^t_4 25	0.5851≠	2
30	0.5792	4
a	0.61601	4
b	-0.00102	4
Ref. Index n_D 20°C	1.342≠	2
25	1.339≠	2
30	1.335	4
"C"	0.7779	4
MR (Obs.)	25.72≠	2
MR (Calc.)	25.290	5
(nD-d/2)	1.046≠	2
Dielectric	1.801	5
A -60 to 55 °C	6.73812	2
B	950.84	2
C	237.0	2
A* -60 to 20 °C	1.10831	5
B*	886.37	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 55 to t_c °C	7.23672	5
Bc	1261.3	5
Cc	280.8	5
Cryos. consts. A°	0.00595	2
B°		
t_e °C	9.167	5

		Ref.
dt/dP °C/mm 25°C	0.0244	4
BP	0.03652	4
t_e	0.0370	5
30 mm	0.4973	4
ΔHm cal/g	10.786	2
ΔHv cal/g 25°C	72.15	2
30 mm	86.88	5
BP	75.37	2
t_e	75.43	5
t_e (d, e)	75.43	5
ΔHv/T_e	19.27	5
d -60 to 10 °C	77.03	5
e	0.1750	5
d' e' to °C		
d_c g/ml	0.238	2
v_c ml/g	4.200	2
t_c °C	160.60	2
P_c mm	23993.	2
PV/RT 25°C	0.9321	5
30 mm	1.0000	5
BP	0.9554	4
t_e	0.9557	5
t_c	0.269	2
ΔHc kcal/m	777.37	2
ΔHf	-44.98	2
ΔFf (gas)	-3.66	2
Viscosity centistokes η -10 °C	0.626	2
-5	0.576	2
0	0.534	2
5	0.498	2
B^v -10 to 5 °C	484.9	4
A^v	3.95415	4
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.40487	2
400	0.52047	2
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	-0.0159	4
n	0.0016	4
o	-0.0_662	4
m' 700 to 1000 °K	0.1199	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	12.05	5
30	10.98	5
40	9.94	5
Parachor [P] 20°C		
30		
40		
Sugd.	229.2	5
Exp. L.I.%/wt. u. Dispersion	98.≠	2
Flash Point °C	-75.	5
Fire Point		
M Spec.	Yes	2
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 9

NAME	n-Hexane	STRUCTURAL FORMULA
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_6H_{14} ; Molecular Weight 86.172	$CH_3(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C	-95.348	2
F.P. 100%		
B.P. °C 760 mm	68.740	2
100	15.81	2
30	-7.44	4
10	-25.1	4
1	-54.0	5
Pressure mm 25°C	151.3	4
t_e	914.5	5
Density g/ml 20°C	0.65937	2
d^t_4 25	0.65481	2
30	0.65023	4
a	0.67765	4
b	-0.03885	4
Ref. Index n_D 20°C	1.37486	2
25	1.37226	2
30	1.36938	4
"C"	0.7607	4
MR (Obs.)	29.907	2
MR (Calc.)	29.908	5
(nD-d/2)	1.04518	2
Dielectric	1.890	3
A -10 to	6.87776	2
B 110 °C	1171.53	2
C	224.366	2
A* -10 to	1.25780	5
B* 100 °C	1098.66	5
K	24.0	5
c	-0.13176	4
t_k 100 to	117.	4
t_x 195 °C	285.6	5
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 110 to	7.31938	4
Bc t_c °C	1483.1	4
Cc	265.9	4
Cryos. A°	0.04956	2
consts. B°	0.0039	2
t_e °C	74.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1524	4
BP	0.04191	2
t_e	0.0363	5
30 mm	0.5815	4
ΔHm cal/g	36.137	2
ΔHv cal/g 25°C	87.50	2
30 mm	93.37	5
BP	80.03	2
t_e	79.01	5
t_e (d, e)	78.98	5
ΔHv/T_e	19.57	5
d -10 to	92.06	5
e 75 °C	0.1751	5
d' to		
e' °C		
d_c g/ml	0.234	2
v_c ml/g	4.271	2
t_c °C	234.7	2
P_c mm	22739.	2
PV/RT 25°C	0.9847	5
30 mm	1.0000	5
BP	0.9503	4
t_e	0.9447	5
t_c	0.264	2
ΔHc kcal/m	928.93	2
ΔHf	-47.52	2
ΔFf	-1.03	2
Viscosity centistokes η 30 °C	0.4389	2
40	0.4085	2
50	0.3817	2
60	0.3577	2
B^v 15 to	297.4	4
A^v 60 °C	$\bar{2}$.66156	4
(B^v) -30 to	309.4	4
(A^v) 15 °C	$\bar{1}$.61885	4
c_p liq. °K		
c_p vap. 300°K	0.39885	2
400	0.50446	2
c_v vap.		

Property		Value	Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0304	4
n	600 °K	0.0014	4
o		-0.0_643	4
m'	700 to	0.1040	4
n'	1000 °K	0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm.	20°C	18.42	2
γ	30	17.38	2
	40	16.36	2
Parachor [P]	20°C	271.0	4
	30	270.9	4
	40	270.9	4
	Sugd.	268.2	5
Exp. L. 1.%/wt.		3.5	3'
u.		18.0	3'
Dispersion		98.0	2
Flash Point °C		-26.0	3'
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		60.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes η	-20°C	0.691	2
	20	0.4741	2
	70	0.336	2

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' NFPA 325

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 10

NAME	2-Methylpentane	STRUCTURAL FORMULA
	Isohexane	$CH_3CHCH_2CH_2CH_3$
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_6H_{14}; Molecular Weight 86.172	CH_3

Property	Value	Ref.
F.P. °C	-153.670	2
F.P. 100%		
B.P. °C 760 mm	60.271	2
100	8.06	2
30	-14.82	4
10	-32.1	4
1	-60.55	5
Pressure mm 25°C	211.8	4
t_e	891.5	5
Density g/ml 20°C	0.65315	2
d_4^t 25	0.64852	2
30	0.64386	4
a	0.67177	4
b	-0.0₃890	4
Ref. Index n_D 20°C	1.37145	2
25	1.36873	2
30	1.36586	4
"C"	0.7613	4
MR (Obs.)	29.946	2
MR (Calc.)	29.908	5
(nD-d/2)	1.04488	2
Dielectric	1.881	5
A (-15 to 100 °C)	6.83910	2
B	1135.410	2
C	226.572	2
A* (-15 to 75 °C)	1.22708	5
B*	1063.37	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (100 to t_c °C)	7.31635	4
Bc	1468.9	4
Cc	271.5	4
Cryos. consts. A°	0.05287	2
B°	0.005	2
t_e °C	65.38	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1143	4
BP	0.04141	2
t_e	0.0366	5
30 mm	0.5717	4
ΔHm cal/g	17.407	2
ΔHv cal/g 25°C	82.83	2
30 mm	89.76	5
BP	77.09	2
t_e	76.25	5
t_e (d, e)	76.23	5
ΔHv/T_e	19.41	5
d (-15 to 65 °C)	87.26	5
e	0.1688	5
d' to		
e' °C		
d_c g/ml	0.235	2
v_c ml/g	4.259	2
t_c °C	224.9	2
P_c mm	22762.	2
PV/RT 25°C	0.9793	5
30 mm	1.0000	5
BP	0.9512	4
t_e	0.9463	5
t_c	0.269	2
ΔHc kcal/m	927.23	2
ΔHf	-48.82	2
ΔFf	-1.97	2
Viscosity centistokes η 0 °C	0.5525	3
20	0.4746	3
30	0.4349	3
B^v (-10 to 40 °C)	286.99	4
A^v	1̄.69184	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.40187	2
400	0.51061	2
c_v vap. 388.56°K	0.366	3

Property	Value	Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0150	4
n	0.0014	4
o	-0.0₆50	4
m' (700 to 1000 °K)	0.1533	4
n'	0.0011	4
o'	-0.0₆35	4
Surface tension dynes/cm. γ 20°C	17.38	2
30	16.37	2
40	15.36	2
Parachor [P] 20°C	269.7	4
30	269.7	4
40	269.6	4
Sugd.	268.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.6	2
Flash Point °C	-14.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 ASTM 109

No. 11

NAME	3-Methylpentane		STRUCTURAL FORMULA
Mole % Pur. 99.8	Ref. 3	Molecular Formula C_6H_{14}	Molecular Weight 86.172

STRUCTURAL FORMULA: $CH_3CH_2CH(CH_3)CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	63.282	2
100	10.53	2
30	-12.61	4
10	-30.1	4
1	-58.87	5
Pressure mm 25°C	189.8	4
t_e	902.1	5
Density g/ml 20°C	0.66431	2
d^t_4 25	0.65976	2
30	0.65519	4
a	0.68259	4
b	-0.0_388	4
Ref. Index n_D 20°C	1.37652	2
25	1.37386	2
30	1.37106	4
"C"	0.7582	4
MR (Obs.)	29.802	2
MR (Calc.)	29.908	5
(nD-d/2)	1.04436	2
Dielectric	1.895	5
A -15 to	6.84887	2
B 105 °C	1152.368	2
C	227.129	2
A* -15 to	1.22845	5
B* 80 °C	1078.38	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 105 to	7.36387	4
Bc t_c °C	1520.0	4
Cc	276.46	4
Cryos. consts. A°		
B°		
t_e °C	68.84	5

		Ref.
dt/dP °C/mm 25°C	0.1262	4
BP	0.04182	2
t_e	0.0366	5
30 mm	0.5781	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.96	2
30 mm	90.29	5
BP	77.88	2
t_e	76.99	5
t_e (d, e)	76.97	5
$\Delta Hv/T_e$	19.40	5
d -15 to	88.23	5
e 70 °C	0.1636	5
d' to		
e' °C		
d_c g/ml	0.235	2
v_c ml/g	4.259	2
t_c °C	231.2	2
P_c mm	23431.	2
PV/RT 25°C	0.9822	5
30 mm	1.0000	5
BP	0.9531	4
t_e	0.9480	5
t_c	0.273	2
ΔHc kcal/m	927.87	2
ΔHf	-48.28	2
ΔFf	-1.34	2
Viscosity centistokes η 0 °C	0.5774	3'
15	0.5068	3'
25	0.4653	3'
40	0.4156	3'
B^v -10 to	305.47	4
A^v 50 °C	$\bar{2}.64336$	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39885	2
400	0.50446	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0804	4
n	600 °K	0.0014	4
o		-0.0_643	4
m'	700 to	0.0648	4
n'	1000 °K	0.0013	4
o'		-0.0_646	4
Surface tension dynes/cm. γ	20°C	18.12	2
	30	17.08	2
	40	16.03	2
Parachor [P]	20°C	267.9	4
	30	267.8	4
	40	267.6	4
	Sugd.	268.2	5
Exp. L.l.%/wt. u.			
Dispersion		97.1	2
Flash Point °C		-35.	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in+			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 ACS 74, 1951 (1952); 3' Timmermans

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 12

NAME	2,2-Dimethylbutane	STRUCTURAL FORMULA
	Neohexane	$CH_3C(CH_3)_2CH_2CH_3$

Mole % Pur. 99.99	Ref. 2	Molecular Formula C_6H_{14}	Molecular Weight 86.172

Property	Value	Ref.
F.P. °C	-99.870	2
F.P. 100%		
B.P. °C 760 mm	49.741	2
100	-2.0	2
30	-24.49	4
10	-41.5	4
1	-69.3	5
Pressure mm 25°C	319.1	4
t_e	864.9	5
Density g/ml 20°C	0.64916	2
d_4^t 25	0.64446	2
30	0.63972	4
a	0.66820	4
b	-0.0$_3$889	4
Ref. Index n_D 20°C	1.36876	2
25	1.36595	2
30	1.36312	4
"C"	0.7608	4
MR (Obs.)	29.935	2
MR (Calc.)	29.908	5
(nD-d/2)	1.04418	2
Dielectric	1.873	5
A (-25 to 95 °C)	6.75483	2
B	1081.176	2
C	229.343	2
A* (-25 to 65 °C)	1.14940	5
B*	1009.44	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (95 to t_c °C)	7.34293	4
Bc	1494.7	4
Cc	286.2	4
Cryos. consts. A°	0.002321	2
B°	0.000	2
t_e °C	53.84	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0814	4
BP	0.04117	2
t_e	0.0372	5
30 mm	0.5619	4
ΔHm cal/g	1.607	2
ΔHv cal/g 25°C	76.79	2
30 mm	84.62	5
BP	72.96	2
t_e	72.32	5
t_e (d,e)	72.32	5
ΔHv/T_e	19.06	5
d (-25 to 90 °C)	80.77	5
e	0.1571	5
d' to		
e' °C		
d_c g/ml	0.240	2
v_c ml/g	4.166	2
t_c °C	216.2	2
P_c mm	23309.	2
PV/RT 25°C	0.9754	5
30 mm	1.0000	5
BP	0.9544	4
t_e	0.9505	5
t_c	0.274	2
ΔHc kcal/m	924.53	2
ΔHf	-51.00	2
ΔFf	-2.90	2
Viscosity centistokes η 0 °C	0.7144	3
20	0.5777	3
25	0.5446	3
30	0.5158	3
B^v (-10 to 40 °C)	390.6	4
A^v	$\bar{2}$.42425	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39560	2
400	0.50712	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0046	4
n	0.0014	4
o	-0.0$_6$47	4
m' (700 to 1000 °K)	-0.0210	4
n'	0.0016	4
o'	-0.0$_6$64	4
Surface tension dynes/cm. γ 20°C	16.30	2
30	15.31	2
40	14.33	2
Parachor [P] 20°C	267.2	4
30	267.2	4
40	267.1	4
Sugd.	268.2	5
Exp. L.1.%/wt. u.		
Dispersion	99.8	2
Flash Point °C	-47.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Timmermans

No. 13

NAME	2, 3-Dimethylbutane	STRUCTURAL FORMULA
		$CH_3CH\ CH\ CH_3$ / CH_3CH_3

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.99	2	C_6H_{14}	86.172

Property	Value	Ref.
F.P. °C	-128.538	2
F.P. 100%		
B.P. °C 760 mm	57.988	2
100	5.45	2
30	-17.53	4
10	-34.9	4
1	-63.37	5
Pressure mm 25°C	234.6	4
t_e	887.5	5
Density g/ml 20°C	0.66164	2
d^t_4 25	0.65702	2
30	0.65237	4
a	0.68026	4
b	$-0.0_{3}885$	4
Ref. Index n_D 20°C	1.37495	2
25	1.37231	2
30	1.36939	4
"C"	0.7583	5
MR (Obs.)	29.810	2
MR (Calc.)	29.908	5
(nD-d/2)	1.04413	2
Dielectric	1.890	5
A (-20 to 100 °C)	6.80983	2
B	1127.187	2
C	228.900	2
A* (-20 to 75 °C)	1.19420	5
B*	1053.55	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (100 to t_c °C)	7.30917	4
Bc	1481.8	4
Cc	277.4	4
Cryos. consts. A°	0.00467	2
B°		
t_e °C	62.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1059	4
BP	0.04173	2
t_e	0.0370	5
30 mm	0.5738	4
ΔHm cal/g	2.251	2
ΔHv cal/g 25°C	80.77	2
30 mm	87.57	5
BP	75.65	2
t_e	74.87	5
t_e (d, e)	74.86	5
ΔHv/T_e	19.19	5
d (-20 to 65 °C)	84.80	5
e	0.1578	5
d' to °C		
e'		
d_c g/ml	0.241	2
v_c ml/g	4.154	2
t_c °C	227.1	2
P_c mm	23552.	2
PV/RT 25°C	0.9800	5
30 mm	1.0000	5
BP	0.9535	4
t_e	0.9489	5
t_c	0.270	2
ΔHc kcal/m	926.40	2
ΔHf	-49.48	2
ΔFf	-1.69	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39177	2
400	0.50248	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	-0.0058	4
n	0.0015	4
o	$-0.0_{6}54$	4
m' (700 to 1000 °K)	0.0686	4
n'	0.0013	4
o'	$-0.0_{6}46$	4
Surface tension dynes/cm. γ 20°C	17.37	2
30	16.37	2
40	15.37	2
Parachor [P] 20°C	266.3	4
30	266.2	4
40	266.1	4
Sugd.	268.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.3	2
Flash Point °C	-37.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	n-Heptane			STRUCTURAL FORMULA
Mole % Pur. 99.94	Ref. 2	Molecular Formula C_7H_{16}	Molecular Weight 100 198	$CH_3(CH_2)_5CH_3$

Property	Value	Ref.
F.P. °C	-90.610	2
F.P. 100%		
B.P. °C 760 mm	98.427	2
100	41.772	2
30	16.80	4
10	-2.1	2
1	-33.2	4
Pressure mm 25°C	45.81	4
t_e	988.01	5
Density g/ml 20°C	0.68376	2
d_4^t 25	0.67951	2
30	0.67525	4
a	0.70075	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.38764	2
25	1.38511	2
30	1.38250	4
"C"	0.7572	4
MR (Obs.)	34.550	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04576	2
Dielectric	1.924	3
A (15 to 130 °C)	6.90240	2
B	1268.115	2
C	216.90	2
A* (15 to 155 °C)	1.33143	5
B*	1194.60	5
K	24.	5
c	-0.14584	4
t_k (155 to 220 °C)	157.	4
t_x	321.	5
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (130 to t_c °C)	7.3270	5
Bc	1581.7	5
Cc	257.6	5
Cryos. consts. A°	0.05065	2
B°	0.0033	2
t_e °C	107.58	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4376	4
BP	0.04479	5
t_e	0.0365	5
30 mm	0.6237	4
ΔHm cal/g	33.474	2
ΔHv cal/g 25°C	87.18	2
30 mm	89.14	4
BP	75.60	2
t_e	73.96	5
t_e (d, e)	74.08	5
ΔHv/T_e	19.46	5
d (15 to 105 °C)	91.93	4
e	0.1659	4
d' (to °C)		
e'		
d_c g/ml	0.235	2
v_c ml/g	4.252	2
t_c °C	267.01	2
P_c mm	20528.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9401	4
t_e	0.9326	5
t_c	0.260	2
ΔHc kcal/m	1075.85	2
ΔHf	-53.63	2
ΔFf	0.27	2
Viscosity centistokes η 30 °C	0.5586	2
50	0.4752	2
70	0.4118	2
90	0.3624	2
B^v (20 to 100 °C)	344.88	4
A^v	$\bar{1}$.60962	4
(B^v) (-60 to 20 °C)	391.3	4
(A^v)	$\bar{1}$.44706	4
c_p liq. 300 °K	0.39780	5
400	0.50182	5
c_p vap. 300 °K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0373	5
g	0.0013	5
h	-0.0_639	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' (700 to 1000 °K)	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	19.29	5
30	18.34	5
40	17.41	5
Parachor [P] 20°C		
30		
40		
Sugd.	307.2	5
Exp. L.1.%/wt.	3.4	3'
u.	18.0	3'
Dispersion	97.7	2
Flash Point °C	-3.89	3'
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	593.	1
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514; 3' NFPA 325

No. 15

NAME	2-Methylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{16} / Molecular Weight 100.198	$CH_3CHCH_2(CH_2)_2CH_3$ with CH_3 on C-2

Property	Value	Ref.
F.P. °C	-118.276	2
F.P. 100%		
B.P. °C 760 mm	90.052	2
100	34.093	2
30	9.52	4
10	-9.09	4
1	-39.7	5
Pressure mm 25°C	65.88	4
t_e	971.1	5
Density g/ml 20°C	0.67859	2
d^t_4 25	0.67439	2
30	0.67022	4
a	0.69538	4
b	-0.0₃825	4
Ref. Index n_D 20°C	1.38485	2
25	1.38227	2
30	1.37979	4
"C"	0.7576	4
MR (Obs.)	34.591	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04556	2
Dielectric	1.919	3
A 10 to 125 °C	6.87318	2
B	1236.026	2
C	219.545	2
A* 10 to 110 °C	1.30078	5
B*	1161.12	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 125 to t_c °C	7.31001	4
Bc	1555.4	4
Cc	261.5	4
Cryos. consts. A°	0.04605	2
B°	0.0036	2
t_e °C	98.53	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3189	4
BP	0.04431	2
t_e	0.0366	5
30 mm	0.6145	4
ΔHm cal/g	21.907	2
ΔHv cal/g 25°C	83.02	2
30 mm	85.98	5
BP	73.14	2
t_e	71.85	5
t_e (d, e)	71.79	5
ΔHv/T_e	19.37	5
d 10 to 100 °C	87.50	5
e	0.1595	5
d' to °C		
e'		
d_c g/ml	0.234	2
v_c ml/g	4.272	2
t_c °C	257.9	2
P_c mm	20672.	2
PV/RT 25°C	0.9897	5
30 mm	1.0000	5
BP	0.9467	4
t_e	0.9389	5
t_c	0.267	2
ΔHc kcal/m	1074.14	2
ΔHf	-54.93	2
ΔFf	-0.68	2
Viscosity centistokes η 20 °C	0.5570	3'
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. 19.38°C	0.5570	3'
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0272	4
n	0.0014	4
o	-0.0₆45	4
m' 700 to 1000 °K	0.1062	4
n'	0.0012	4
o'	-0.0₆40	4
Surface tension dynes/cm. γ 20°C	19.29	2
30	18.32	2
40	17.36	2
Parachor [P] 20°C	309.6	4
30	309.5	4
40	309.4	4
Sugd.	307.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.5	2
Flash Point °C	-14.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in⁺ Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Timmermans

No. 16

NAME	3-Methylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3CH_2CH(CH_2)_2CH_3$ with CH_3 on C-3
Molecular Formula	C_7H_{16}	
Molecular Weight	100.198	

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	91.850	2
100	35.561	2
30	10.85	4
10	-7.9	2
1	-38.6	5
Pressure mm 25°C	61.59	4
t_e	976.	5
Density g/ml d^t_4 20°C	0.68713	2
25	0.68295	2
30	0.67877	4
a	0.70384	4
b	-0.0_3822	4
Ref. Index n_D 20°C	1.38864	2
25	1.38609	2
30	1.38351	4
"C"	0.7553	4
MR (Obs.)	34.460	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04508	2
Dielectric	20° 1.93	3
A 10 to 130 °C	6.86764	2
B	1240.196	2
C	219.223	2
A* 10 to 110 °C	1.29292	5
B*	1164.9	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 130 to t_c °C	7.39633	4
Bc	1635.1	4
Cc	270.8	4
Cryos. consts. A°		
B°		
t_e °C	100.58	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3391	4
BP	0.04459	2
t_e	0.0369	5
30 mm	0.6179	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.68	2
30 mm	86.33	5
BP	73.43	2
t_e	72.11	5
t_e (d, e)	72.04	5
ΔHv/T_e	19.33	5
d 10 to 100 °C	88.05	5
e	0.1592	5
d' to °C		
e'		
d_c g/ml	0.240	2
v_c ml/g	4.172	2
t_c °C	262.4	2
P_c mm	21356.	2
PV/RT 25°C	0.9915	5
30 mm	1.0000	5
BP	0.9468	4
t_e	0.9389	5
t_c	0.267	2
ΔHc kcal/m	1074.78	2
ΔHf	-54.35	2
ΔFf	-0.39	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' 700 to 1000°K	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	19.79	2
30	18.81	2
40	17.85	2
Parachor [P] 20°C	307.7	4
30	307.6	4
40	307.5	4
Sugd.	307.2	5
Exp. L. 1.%/wt. u.		
Dispersion	97.4	2
Flash Point °C	-14.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514

No. 17

NAME	3-Ethylpentane Triethylmethane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{16}	Molecular Weight 100.198	$CH_3CH_2CHCH_2CH_3$ C_2H_5

		Ref.
F.P. °C	-118.604	2
F.P. 100%		
B.P. °C 760 mm	93.475	2
100	36.864	2
30	12.00	4
10	-6.8	4
1	-37.8	5
Pressure mm 25°C	58.05	4
t_e	983.0	5
Density g/ml 20°C	0.69816	2
d^t_4 25	0.69395	2
30	0.68982	4
a	0.71499	4
b	-0.0_3829	4
Ref. Index n_D 20°C	1.39339	2
25	1.39084	2
30	1.38840	4
"C"	0.7519	4
MR (Obs.)	34.283	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04431	2
Dielectric	1.939	3
A 10 to 130 °C	6.87564	2
B	1251.827	2
C	219.887	2
A* 10 to 115 °C	1.29505	5
B*	1174.98	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 130 to t_c °C	7.29098	4
Bc	1561.6	4
Cc	261.0	4
Cryos. consts. A°	0.04807	2
B°	0.0039	2
t_e °C	102.49	5

		Ref.
dt/dP °C/mm 25°C	0.3584	4
BP	0.04482	2
t_e	0.0367	5
30 mm	0.6218	4
ΔHm cal/g	22.775	2
ΔHv cal/g 25°C	84.02	2
30 mm	86.47	5
BP	73.83	2
t_e	72.81	5
t_e (d, e)	72.43	5
ΔHv/T_e	19.42	5
d 10 to 100 °C	88.34	5
e	0.1552	5
d' to °C		
e'		
d_c g/ml	0.241	2
v_c ml/g	4.152	2
t_c °C	267.6	2
P_c mm	21736.	2
PV/RT 25°C	0.9917	5
30 mm	1.0000	5
BP	0.9485	4
t_e	0.9404	5
t_c	0.268	2
ΔHc kcal/m	1075.40	2
ΔHf	-53.77	2
ΔFf	1.04	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' 700 to 1000 °K	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	20.44	2
30	19.45	2
40	18.47	2
Parachor [P] 20°C	305.3	4
30	305.2	4
40	305.2	4
Sugd.	307.2	5
Exp. L.l.%/wt. u.		
Dispersion	95.7	2
Flash Point °C	-14.0	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

No. 18

NAME	2, 2-Dimethylpentane

STRUCTURAL FORMULA

$CH_3C(CH_3)_2CH_2CH_2CH_3$ (central C bearing two CH_3 groups)

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.99	2	C_7H_{16}	100.198

Property	Value	Ref.
F.P. °C	-123.811	2
F.P. 100%		
B.P. °C 760 mm	79.197	2
100	23.858	2
30	-0.35	4
10	-18.6	4
1	-48.68	5
Pressure mm 25°C	105.23	4
t_e	942.7	5
Density g/ml 20°C	0.67385	2
d^t_4 25	0.66953	2
30	0.66519	4
a	0.69115	4
b	-0.0_3842	4
Ref. Index n_D 20°C	1.38215	2
25	1.37955	2
30	1.37694	4
"C"	0.7580	4
MR (Obs.)	34.617	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04522	2
Dielectric	1.912	3
A (0 to 115 °C)	6.81480	2
B	1190.033	2
C	223.303	2
A* (0 to 95 °C)	1.24946	5
B*	1115.26	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (115 to t_c °C)	7.50352	4
Bc	1705.8	4
Cc	290.5	4
Cryos. consts. A°	0.03140	2
B°	0.0036	2
t_e °C	86.57	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2138	4
BP	0.04394	2
t_e	0.0372	5
30 mm	0.6047	4
ΔHm cal/g	13.892	2
ΔHv cal/g 25°C	77.36	2
30 mm	81.39	5
BP	69.55	2
t_e	68.44	5
t_e (d, e)	68.45	5
ΔHv/T_e	19.06	5
d (0 to 90 °C)	81.34	5
e	0.1488	5
d' (to °C)		
e'		
d_c g/ml	0.248	2
v_c ml/g	4.032	2
t_c °C	247.7	2
P_c mm	21584.	2
PV/RT 25°C	0.9878	5
30 mm	1.0000	5
BP	0.9486	4
t_e	0.9418	5
t_c	0.268	2
ΔHc kcal/m	1071.45	2
ΔHf	-57.05	2
ΔFf	-1.15	2
Viscosity centistokes η 20 °C	0.5773	3'
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' (700 to 1000 °K)	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	18.02	2
30	17.08	2
40	16.14	2
Parachor [P] 20°C	306.6	4
30	306.5	4
40	306.4	4
Sugd.	307.2	5
Exp. L.1.%/wt. u.		
Dispersion	99.3	2
Flash Point °C	-25.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Ind. Eng. Chem. 38, 338 (1946)

No. 19

NAME	2, 3-Dimethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{16} / Molecular Weight 100.198	$CH_3CH\ CH\ CH_2CH_3$ / CH_3CH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	89.784	2
100	33.237	2
30	8.43	4
10	-10.3	4
1	-41.19	5
Pressure mm 25°C	68.87	4
t_e	974.5	5
Density g/ml 20°C	0.69508	2
d_4^t 25	0.69091	2
30	0.68673	4
a	0.71175	4
b	-0.0_3819	4
Ref. Index n_D 20°C	1.39196	2
25	1.38945	2
30	1.38696	4
"C"	0.7527	4
MR (Obs.)	34.324	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04442	2
Dielectric	1.939	3
A 5 to 130 °C	6.85382	2
B	1238.017	2
C	221.823	2
A* 5 to 110 °C	1.27315	5
B*	1160.44	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 130 to t_c °C	7.40013	4
Bc	1652.5	4
Cc	276.5	4
Cryos. A° consts. B°		
t_e °C	98.49	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3103	4
BP	0.04482	2
t_e	0.0369	5
30 mm	0.6200	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.68	2
30 mm	84.58	5
BP	72.48	2
t_e	71.23	5
t_e (d, e)	71.19	5
ΔHv/T_e	19.20	5
d 5 to	85.83	5
e 100 °C	0.1487	5
d' to		
e' °C		
d_c g/ml	0.247	2
v_c ml/g	4.042	2
t_c °C	264.6	2
P_c mm	22192.	2
PV/RT 25°C	0.9903	5
30 mm	1.0000	5
BP	0.9501	4
t_e	0.9424	5
t_c	0.268	2
ΔHc kcal/m	1073.12	2
ΔHf	-55.81	2
ΔFf	-1.27	2
Viscosity centistokes η 15 °C	0.6233	3'
30	0.6000	3'
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' 700 to 1000 °K	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. 20°C	19.96	2
γ 30	18.98	2
40	18.02	2
Parachor [P] 20°C	304.8	4
30	304.7	4
40	304.6	4
Sugd.	307.2	5
Exp. L.l.%/wt. u.		
Dispersion	96.2	2
Flash Point °C	-16.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Timmermans

No. 20

NAME	2,4-Dimethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{16} / Molecular Weight 100.198	$CH_3CH(CH_3)CH_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-119.242	2
F.P. 100%		
B.P. °C 760 mm	80.500	2
100	25.359	2
30	1.22	4
10	-17.0	4
1	-47.0	5
Pressure mm 25°C	98.395	4
t_e	946.4	5
Density g/ml 20°C	0.67270	2
d^t_4 25	0.66832	2
30	0.66393	4
a	0.69023	4
b	$-0.0_{3}855$	4
Ref. Index n_D 20°C	1.38145	2
25	1.37882	2
30	1.37617	4
"C"	0.7580	4
MR (Obs.)	34.619	2
MR (Calc.)	34.526	5
(nD-d/2)	1.0451	2
Dielectric	1.914	3
A (0 to 115 °C)	6.82621	2
B	1192.041	2
C	221.634	2
A* (0 to 100 °C)	1.26088	5
B*	1117.86	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (115 to t_c °C)	7.33247	4
Bc	1559.5	4
Cc	270.5	4
Cryos. consts. A°	0.03473	2
B°	0.0038	2
t_e °C	87.98	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2252	4
BP	0.04376	2
t_e	0.0369	5
30 mm	0.6031	4
ΔHm cal/g	16.318	2
ΔHv cal/g 25°C	78.44	2
30 mm	82.54	5
BP	70.36	2
t_e	69.26	5
t_e (d, e)	69.21	5
ΔHv/T_e	19.21	5
d (0 to 90 °C)	82.73	5
e	0.1537	5
d' (to °C)		
e'		
d_c g/ml	0.239	2
v_c ml/g	4.192	2
t_c °C	247.1	2
P_c mm	20824.	2
PV/RT 25°C	0.9865	5
30 mm	1.0000	5
BP	0.9487	4
t_e	0.9418	5
t_c	0.270	2
ΔHc kcal/m	1072.44	2
ΔHf	-56.17	2
ΔFf	-0.49	2
Viscosity centistokes η 15 °C	0.5538	3'
30	0.5351	3'
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300 °K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0272	4
n	0.0014	4
o	$-0.0_{6}45$	4
m' (700 to 1000 °K)	0.1062	4
n'	0.0012	4
o'	$-0.0_{6}40$	4
Surface tension dynes/cm. γ 20°C	18.15	2
30	17.17	2
40	16.23	2
Parachor [P] 20°C	307.6	4
30	307.5	4
40	307.5	4
Sugd.	307.2	5
Exp. L. 1. %/wt. u.		
Dispersion	98.6	2
Flash Point °C	-24.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Timmermans

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 21

NAME	3, 3-Dimethylpentane		STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 2	Molecular Formula C_7H_{16}	Molecular Weight 100.198

STRUCTURAL FORMULA: $CH_3CH_2C(CH_3)_2CH_2CH_3$

Property	Value	Ref.
F.P. °C	-134.46	2
F.P. 100%		
B.P. °C 760 mm	86.064	2
100	29.241	2
30	4.36	4
10	-14.4	2
1	-45.3	4
Pressure mm 25°C	82.84	4
t_e	966.5	5
Density g/ml 20°C	0.69327	2
d^t_4 25	0.68908	2
30	0.68488	4
a	0.71004	4
b	-0.03820	4
Ref. Index n_D 20°C	1.39092	2
25	1.38842	2
30	1.38595	4
"C"	0.7527	4
MR (Obs.)	34.332	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04428	2
Dielectric	1.937	3
A (5 to 130 °C)	6.82667	2
B	1228.663	2
C	225.316	2
A* (5 to 105 °C)	1.24360	5
B*	1149.27	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (130 to t_c °C)	7.55060	4
Bc	1795.1	4
Cc	299.3	4
Cryos. consts. A°	0.04418	2
B°	0.0040	2
t_e °C	94.53	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2674	4
BP	0.04509	2
t_e	0.0374	5
30 mm	0.6215	4
ΔHm cal/g	16.857	2
ΔHv cal/g 25°C	78.76	2
30 mm	81.94	4
BP	70.71	2
t_e	69.56	5
t_e (d, e)	69.55	5
ΔHv/T_e	18.95	5
d (0 to 100 °C)	82.54	4
e	0.1375	4
d' to °C		
e'		
d_c g/ml	0.239	3'
v_c ml/g	4.183	3'
t_c °C	263.0	2
P_c mm	22800.	2
PV/RT 25°C	0.9898	5
30 mm	1.0000	5
BP	0.9520	4
t_e	0.9447	5
t_c		
ΔHc kcal/m	1072.57	2
ΔHf	-56.07	2
ΔFf	-0.69	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m (300 to 600 °K)	0.0272	4
n	0.0014	4
o	-0.0_645	4
m' (700 to 1000 °K)	0.1062	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	19.59	2
30	18.62	2
40	17.67	2
Parachor [P] 20°C	304.2	4
30	304.1	4
40	304.1	4
Sugd.	307.2	5
Exp. L. l. %/wt. u.		
Dispersion	97.1	2
Flash Point °C	-18.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' ASTM 109

No. 22

NAME	2, 2, 3-Trimethylbutane
Mole % Pur.	Ref.
Molecular Formula	C_7H_{16}
Molecular Weight	100.198

STRUCTURAL FORMULA

```
      CH3
      |
CH3C    CHCH3
      |     |
   CH3CH3
```

		Ref.
F.P. °C	-24.912	2
F.P. 100%		
B.P. °C 760 mm	80.882	2
100	24.469	2
30	-0.18	4
10	-18.8	4
1	-49.3	5
Pressure mm 25°C	102.36	4
t_e	951.3	5
Density g/ml 20°C	0.69011	2
d^t_4 25	0.68588	2
30	0.68163	4
a	0.70705	4
b	-0.0_3825	4
Ref. Index n_D 20°C	1.38944	2
25	1.38692	2
30	1.38433	4
"C"	0.7535	4
MR (Obs.)	34.374	2
MR (Calc.)	34.526	5
(nD-d/2)	1.04438	2
Dielectric	1.930	5
A (0 to 125 °C)	6.79230	2
B	1200.563	2
C	226.050	2
A* (0 to 100 °C)	1.21608	5
B*	1122.41	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (125 to t_c °C)	7.40100	4
Bc	1666.5	4
Cc	288.7	4
Cryos. consts. A°	0.00441	2
B°	0.0033	2
t_e °C	88.73	5

		Ref.
dt/dP °C/mm 25°C	0.2227	4
BP	0.04484	2
t_e	0.0377	5
30 mm	0.6152	4
ΔHm cal/g	5.393	2
ΔHv cal/g 25°C	76.42	2
30 mm	80.10	5
BP	69.04	2
t_e	67.98	5
t_e (d, e)	67.97	5
ΔHv/T_e	18.82	5
d (0 to 90 °C)	80.08	5
e	0.1365	5
d' (to °C)		
e'		
d_c g/ml	0.254	2
v_c ml/g	3.932	2
t_c °C	258.3	2
P_c mm	22610.	2
PV/RT 25°C	0.9888	5
30 mm	1.0000	5
BP	0.9516	4
t_e	0.9447	5
t_c	0.269	2
ΔHc kcal/m	1071.78	2
ΔHf	-56.63	2
ΔFf	-0.17	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39781	2
400	0.50320	2
c_v vap.		

		Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	-0.0081	4
n	0.0015	4
o	-0.0_654	4
m' (700 to 1000 °K)	0.1121	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	18.76	2
30	17.77	2
40	16.81	2
Parachor [P] 20°C	302.4	4
30	302.1	4
40	301.9	4
Sugd.	307.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	98.3	2
Flash Point °C	-22.	5
Fire Point		
M Spec.	Yes	2
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	n-Octane			STRUCTURAL FORMULA
Mole % Pur. 99.96	Ref. 2	Molecular Formula C_8H_{18}	Molecular Weight 114.224	$CH_3(CH_2)_6CH_3$

Property	Value	Ref.
F.P. °C	-56.795	2
F.P. 100%		
B.P. °C 760 mm	125.665	2
100	65.704	2
30	39.28	4
10	19.2	2
1	-14.9	4
Pressure mm 25°C	14.036	4
t_e	1064.5	5
Density g/ml 20°C	0.70252	2
d^t_4 25	0.69849	2
30	0.69445	4
a	0.71862	4
b	-0.03802	4
Ref. Index n_D 20°C	1.39743	2
25	1.39505	2
30	1.39269	4
"C"	0.7547	4
MR (Obs.)	39.192	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04617	2
Dielectric	1.948	3
A 40 to	6.92377	2
B 155 °C	1355.126	2
C	209.517	2
A* 40 to	1.38276	4
B* 150 °C	1278.24	4
K	24.	5
c	0.14684	4
t_k 150 to	190.	4
t_x 250 °C	353.	5
A' 15 to	7.47176	4
B' 40 °C	1641.52	4
C'	234.5	4
A'* 15 to	1.87375	4
B'* 40 °C	1541.29	4
Ac 155 to	7.30712	4
Bc t_c °C	1648.0	4
Cc	246.9	4
Cryos. A°	0.05329	2
consts. B°	0.0031	2
t_e °C	138.25	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.2698	5
BP	0.04738	2
t_e	0.0364	5
30 mm	0.6613	4
ΔHm cal/g	43.397	2
ΔHv cal/g 25°C	86.80	2
30 mm	85.63	5
BP	71.91	2
t_e	70.06	5
t_e (d, e)	70.05	5
ΔHv/T_e	19.45	5
d 20 to	90.50	4
e 140 °C	0.1479	4
d' to		
e' °C		
d_c g/ml	0.235	2
v_c ml/g	4.255	2
t_c °C	296.2	2
P_c mm	18726.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9411	5
t_e	0.9299	5
t_c	0.256	2
ΔHc kcal/m	1222.77	2
ΔHf	-59.74	2
ΔFf	1.58	2
Viscosity centistokes η 60 °C	0.5353	2
80	0.4602	2
100	0.4022	2
120	0.3560	2
B^v 20 to	392.25	4
A^v 75 °C	$\bar{2}.55168$	4
(B^v) 75	387.11	4
(A^v) 130	$\bar{2}.56694$	4
c_p liq. 20 °C.	0.52	3'
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to	0.0265	4
n 600 °K	0.0014	4
o	-0.0_646	4
m' 700 to	0.1079	4
n' 1000 °K	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	21.76	2
30	20.77	2
40	19.80	2
Parachor [P] 20°C	351.2	4
30	351.2	4
40	351.2	4
Sugd.	346.2	5
Exp. L.l.%/wt.	3.2	3[2]
u.	11.3	3[2]
Dispersion	98.0	2
Flash Point °C	15.56	3[2]
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	Yes	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		
Viscosity centistokes 30°C	0.7005	2
70	0.4950	2

$T_R = 0.75T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514; 3' Timmermans; 3[2] NFPA 325

No. 24

NAME	2-Methylheptane	STRUCTURAL FORMULA
		$CH_3CH(CH_2)_4CH_3$ (branch: CH_3)

Mole % Pur.	Ref.	Molecular Formula C_8H_{18}	Molecular Weight 114.224

Property	Value	Ref.
F.P. °C	-109.040	2
F.P. 100%		
B.P. °C 760 mm	117.647	2
100	58.297	2
30	32.15	4
10	12.3	2
1	-21.7	5
Pressure mm 25°C	20.637	5
t_e	1052.	5
Density g/ml 20°C	0.69792	2
d^t_4 25	0.69392	2
30	0.68991	4
a	0.71390	4
b	-0.0_3794	4
Ref. Index n_D 20°C	1.39494	2
25	1.39257	2
30	1.39020	4
"C"	0.7551	4
MR (Obs.)	39.231	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04598	2
Dielectric	1.946	5
A (35 to 150 °C)	6.91735	2
B	1337.468	2
C	213.693	2
A* (35 to 140 °C)	1.36848	5
B*	1257.10	5
K		
c		
t_k to t_x °C		
A' (0 to 35 °C)	7.66293	5
B'	1729.19	5
C'	247.4	5
A'* 10 to	2.05206	5
B'* 35 °C	1620.47	5
Ac (150 to t_c °C)	7.24113	4
Bc	1581.7	4
Cc	245.3	4
Cryos. consts. A°	0.0458	2
B°		
t_e °C	129.66	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.903	4
BP	0.04691	2
t_e	0.0364	5
30 mm	0.6542	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.02	2
30 mm	82.65	5
BP	70.30	2
t_e	68.65	5
t_e (d, e)	68.56	5
ΔHv/T_e	19.46	5
d (25 to 130 °C)	87.30	5
e	0.1445	5
d' to e' °C		
d_c g/ml	0.234	2
v_c ml/g	4.273	2
t_c °C	288.	2
P_c mm	18848.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9487	4
t_e	0.9386	5
t_c	0.263	2
ΔHc kcal/m	1221.08	2
ΔHf	-60.98	2
ΔFf	0.92	2
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' (700 to 1000 °K)	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. 20°C	20.60	2
γ 30	19.68	2
40	18.77	2
Parachor [P] 20°C	348.7	4
30	348.8	4
40	348.8	4
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.5	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	3-Methylheptane	STRUCTURAL FORMULA
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_8H_{18} — Molecular Weight 114.224	$CH_3CH_2CH(CH_2)_3CH_3$ with CH_3 on the CH

Property	Value	Ref.
F.P. °C	-120.500	2
F.P. 100%		
B.P. °C 760 mm	118.925	2
100	59.358	2
30	33.15	4
10	13.3	2
1	-21.0	5
Pressure mm 25°C	19.582	4
t_e	1070.6	5
Density g/ml 20°C	0.70582	2
d^t_4 25	0.70175	2
30	0.69767	4
a	0.72208	4
b	-0.0_3809	4
Ref. Index n_D 20°C	1.39848	2
25	1.39610	2
30	1.39374	4
"C"	0.7531	4
MR (Obs.)	39.100	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04557	2
Dielectric	1.956	5
A 30 to 150 °C	6.89944	2
B	1331.530	2
C	212.414	2
A* 30 to 140 °C	1.33027	5
B*	1246.6	5
K		
c		
t_k to t_x °C		
A' 0 to 30 °C	7.77698	5
B'	1797.39	5
C'	252.16	5
A'* 10 to 30 °C	2.15798	5
B'*	1684.52	5
Ac 150 to t_c °C	7.30319	5
Bc	1640.9	5
Cc	252.4	5
Cryos. consts. A°	0.0587	2
B°		
t_e °C	131.67	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.9478	5
BP	0.04712	2
t_e	0.0361	5
30 mm	0.6556	4
ΔHm cal/g	23.813	2
ΔHv cal/g 25°C	83.35	2
30 mm	83.01	5
BP	71.30	2
t_e	69.60	5
t_e (d,e)	69.56	5
ΔHv/T_e	19.64	5
d 25 to 130 °C	87.54	5
e	0.1366	5
d' e' to °C		
d_c g/ml	0.239	2
v_c ml/g	4.185	2
t_c °C	292.	2
P_c mm	19456.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9601	4
t_e	0.9504	5
t_c	0.264	2
ΔHc kcal/m	1221.76	2
ΔHf	-60.34	2
ΔFf	1.12	2
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	21.17	2
30	20.24	2
40	19.32	2
Parachor [P] 20°C	347.2	4
30	347.3	4
40	347.4	4
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.5	2
Flash Point °C	6.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 26

NAME	4-Methylheptane	STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 2	$CH_3(CH_2)_2CH(CH_2)_2CH_3$
Molecular Formula C_8H_{18}	Molecular Weight 114.224	CH_3 (on CH)

Property	Value	Ref.
F.P. °C	-120.955	2
F.P. 100%		
B.P. °C 760 mm	117.709	2
100	58.347	2
30	32.23	4
10	12.4	2
1	-22.0	4
Pressure mm 25°C	20.55	4
t_e	1063.6	5
Density g/ml 20°C	0.70463	2
d_4^t 25	0.70055	2
30	0.69646	4
a	0.72093	4
b	-0.0_3810	4
Ref. Index n_D 20°C	1.39792	2
25	1.39553	2
30	1.39316	4
"C"	0.7533	4
MR (Obs.)	39.117	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04560	2
Dielectric	1.954	5
A (25 to 150 °C)	6.90065	2
B	1327.661	2
C	212.568	2
A* (25 to 140 °C)	1.33746	5
B*	1244.16	5
K		
c		
t_k (to °C)		
t_x		
A' (0 to 35 °C)	7.8970	5
B'	1860.28	5
C'	257.54	5
A'* (10 to 35 °C)	2.2715	5
B'*	1743.38	5
Ac (150 to t_c °C)	7.31607	4
Bc	1645.2	4
Cc	253.5	4
Cryos. consts. A°	0.0563	2
B°		
t_e °C	130.15	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.9068	5
BP	0.04695	2
t_e	0.0361	5
30 mm	0.6534	4
ΔHm cal/g	22.675	2
ΔHv cal/g 25°C	83.01	2
30 mm	82.79	5
BP	70.91	2
t_e	69.23	5
t_e (d, e)	69.18	5
ΔHv/T_e	19.61	5
d (30 to 130 °C)	87.27	5
e	0.1390	5
d' (to °C)		
e'		
d_c g/ml	0.240	2
v_c ml/g	4.167	2
t_c °C	290.	2
P_c mm	19456.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9575	4
t_e	0.9477	5
t_c	0.264	2
ΔHc kcal/m	1221.89	2
ΔHf	-60.17	2
ΔFf	1.86	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' (700 to 1000 °K)	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	21.00	2
30	20.07	2
40	19.15	2
Parachor [P] 20°C	347.1	4
30	347.2	4
40	347.3	4
Sugd.	346.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.5	2
Flash Point °C	6.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75 T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	3-Ethylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{18}	Molecular Weight 114.224

STRUCTURAL FORMULA: $CH_3CH_2CH(C_2H_5)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	118.534	2
100	58.902	2
30	32.68	4
10	12.8	2
1	-20.47	5
Pressure mm 25°C	20.03	5
t_e	1080.9	5
Density g/ml 20°C	0.71358	2
d^t_4 25	0.70948	2
30	0.70537	5
a	0.72996	4
b	-0.0_381	4
Ref. Index n_D 20°C	1.40162	2
25	1.39919	2
30	1.39644	5
"C"	0.7498	5
MR (Obs.)	38.944	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04483	2
Dielectric	1.964	5
A 25 to 150 °C	6.89098	2
B	1327.884	2
C	212.595	2
A* 25 to 140 °C	1.30712	5
B*	1239.30	5
K		
c		
t_k to °C		
t_x		
A' 0 to 35 °C	7.30017	5
B'	1529.6	5
C'	230.	5
A'* 10 to 35 °C	1.72722	5
B'*	1437.6	5
Ac 150 to t_c °C	7.29602	5
Bc	1639.8	5
Cc	253.2	5
Cryos. consts. A°		
B°		
t_e °C	131.67	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.9283	4
BP	0.04719	2
t_e	0.0359	5
30 mm	0.6559	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.19	4
30 mm	82.70	5
BP	71.70	2
t_e	70.52	5
t_e (d, e)	70.01	5
ΔHv/T_e	19.88	5
d 30 to 130 °C	86.88	5
e	0.1281	5
d' to °C		
e'		
d_c g/ml	0.245	2
v_c ml/g	4.080	2
t_c °C	294.	5
P_c mm	19914.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9687	4
t_e	0.9596	5
t_c	0.264	2
ΔHc kcal/m	1222.19	2
ΔHf	-59.88	2
ΔFf	1.80	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	21.51	2
30	20.58	2
40	19.64	2
Parachor [P] 20°C	345.2	4
30	345.1	4
40	344.9	4
Sugd.	346.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	96.4	2
Flash Point °C	-4.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	2,2-Dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_8H_{18}; Molecular Weight 114.224	$CH_3C(CH_3)_2-(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C	-121.18	2
F.P. 100%		
B.P. °C 760 mm	106.840	2
100	48.222	2
30	22.54	4
10	3.1	2
1	-28.8	4
Pressure mm 25°C	34.05	4
t_e	1033.1	5
Density g/ml 20°C	0.69528	2
d^t_4 25	0.69112	2
30	0.68695	4
a	0.71190	4
b	-0.0$_3$823	4
Ref. Index n_D 20°C	1.39349	2
25	1.39104	2
30	1.38850	4
"C"	0.7552	4
MR (Obs.)	39.252	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04585	2
Dielectric	1.942	5
A (20 to 140 °C)	6.83715	2
B	1273.594	2
C	215.072	2
A* (20 to 130 °C)	1.28438	5
B*	1191.69	5
K		
c		
t_k to t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (140 to t_c °C)	7.24434	5
Bc	1580.0	5
Cc	256.0	5
Cryos. consts. A°	0.0354	2
B°		
t_e °C	118.07	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5772	4
BP	0.04650	2
t_e	0.0366	5
30 mm	0.6417	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.02	2
30 mm	79.03	5
BP	67.7	2
t_e	66.23	5
t_e (d, e)	66.19	5
ΔHv/T_e	19.33	5
d (20 to 120 °C)	82.06	4
e	0.1344	4
d' to		
e' °C		
d_c g/ml	0.245	2
v_c ml/g	4.088	2
t_c °C	279.	2
P_c mm	19456.	2
PV/RT 25°C	0.99147	5
30 mm	1.0000	5
BP	0.9580	4
t_e	0.9490	5
t_c	0.264	2
ΔHc kcal/m	1218.88	2
ΔHf	-62.63	2
ΔFf	0.72	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (300 to 600°K)	0.0445	5
g	0.0013	5
h	-0.0$_6$37	5
f' to		
g' °K		
h'		
m (300 to 600°K)	0.0265	4
n	0.0014	4
o	-0.0$_6$46	4
m' (700 to 1000°K)	0.1079	4
n'	0.0012	4
o'	-0.0$_6$40	4
Surface tension dynes/cm. γ 20°C	19.60	2
30	18.69	2
40	17.80	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	99.7	2
Flash Point °C	-3.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 29

NAME	2, 3-Dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{18}	$CH_3CH\ CH\ (CH_2)_2CH_3$
	Molecular Weight 114.224	$CH_3\ CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	115.607	2
100	55.965	2
30	29.77	4
10	9.9	2
1	-25.45	4
Pressure mm 25°C	23.44	4
t_e	1066.2	5
Density g/ml 20°C	0.71214	2
d_4^t 25	0.70809	2
30	0.70403	4
a	0.72832	4
b	-0.0_3804	4
Ref. Index n_D 20°C	1.40113	2
25	1.39880	2
30	1.39625	4
"C"	0.7509	4
MR (Obs.)	38.981	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04506	2
Dielectric	1.963	5
A (25 to 150 °C)	6.87004	2
B	1315.503	2
C	214.157	2
A* (25 to 140 °C)	1.29661	5
B*	1228.9	5
K		
c		
t_k to t_x °C		
A' (0 to 30 °C)	8.51379	4
B'	2239.64	4
C'	288.51	4
A'* 10 to	2.84821	4
B'* 30 °C	2097.36	4
Ac (150 to t_c °C)	7.27817	5
Bc	1630.7	5
Cc	255.6	5
Cryos. consts. A°		
B°		
t_e °C	128.23	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8131	4
BP	0.04724	2
t_e	0.0363	5
30 mm	0.6548	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.17	2
30 mm	81.29	4
BP	70.20	2
t_e	68.59	5
t_e (d, e)	68.57	5
$\Delta Hv/T_e$	19.52	5
d (30 to 130 °C)	85.14	4
e	0.1293	4
d' (to °C)		
e'		
d_c g/ml	0.248	2
v_c ml/g	4.036	2
t_c °C	293.	2
P_c mm	20216.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9639	4
t_e	0.9546	5
t_c	0.264	2
ΔHc kcal/m	1221.45	2
ΔHf	-60.40	2
ΔFf	2.17	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Range	Value	Ref.
f	300 to 600 °K	0.0445	5
g		0.0013	5
h		-0.0_637	5
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0265	4
n		0.0014	4
o		-0.0_646	4
m'	700 to 1000 °K	0.1079	4
n'		0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm. γ 20°C		20.99	2
30		20.07	2
40		19.16	2
Parachor [P] 20°C			
30			
40			
Sugd.		346.2	5
Exp. L.1.%/wt. u.			
Dispersion		97.0	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in + Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	2,4-Dimethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{18} / Molecular Weight 114.224

STRUCTURAL FORMULA: $CH_3CH(CH_3)CH_2CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	109.429	2
100	50.585	2
30	24.77	4
10	5.2	2
1	-26.9	4
Pressure mm 25°C	30.35	4
t_e	1042.0	5
Density g/ml 20°C	0.70036	2
d_4^t 25	0.69620	2
30	0.69203	4
a	0.71698	4
b	-0.0_3824	4
Ref. Index n_D 20°C	1.39534	2
25	1.39291	2
30	1.39050	4
"C"	0.7533	4
MR (Obs.)	39.130	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04516	2
Dielectric	1.947	5
A (15 to 145 °C)	6.85305	2
B	1287.876	2
C	214.790	2
A* (15 to 130 °C)	1.29519	5
B*	1204.86	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (145 to t_c °C)	7.29625	5
Bc	1624.8	5
Cc	258.9	5
Cryos. consts. A°		
B°		
t_e °C	121.02	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6388	4
BP	0.04664	2
t_e	0.0365	5
30 mm	0.6451	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.02	2
30 mm	79.82	4
BP	68.5	2
t_e	66.99	5
t_e (d, e)	66.95	5
ΔHv/T_e	19.41	5
d (25 to 120 °C)	83.13	4
e	0.1337	4
d' (to °C)		
e'		
d_c g/ml	0.245	2
v_c ml/g	4.080	2
t_c °C	282.	2
P_c mm	19608.	2
PV/RT 25°C	0.9907	5
30 mm	1.0000	5
BP	0.9591	4
t_e	0.9501	5
t_c	0.264	2
ΔHc kcal/m	1220.15	2
ΔHf	-61.47	2
ΔFf	0.89	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (300 to 600°K)	0.0445	5
g	0.0013	5
h	-0.0_637	5
f' (to °K)		
g'		
h'		
m (300 to 600°K)	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' (700 to 1000°K)	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. 20°C	20.05	2
γ 30	19.13	2
40	18.22	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.8	2
Flash Point °C	-2.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	2, 5-Dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. 99.99 (Ref. 2)	Molecular Formula C_8H_{18}; Molecular Weight 114.224	$CH_3CH(CH_3)(CH_2)_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-91.200	2
F.P. 100%		
B.P. °C 760 mm	109.103	2
100	50.468	2
30	24.74	4
10	5.3	2
1	-26.76	4
Pressure mm 25°C	30.41	4
t_e	1040.3	5
Density g/ml 20°C	0.69354	2
d^t_4 25	0.68934	2
30	0.68513	4
a	0.71032	4
b	-0.0_3831	4
Ref. Index n_D 20°C	1.39246	2
25	1.39004	2
30	1.38740	4
"C"	0.7552	4
MR (Obs.)	39.260	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04569	2
Dielectric	1.939	5
A (20 to 140 °C)	6.85984	2
B	1287.274	2
C	214.412	2
A* (20 to 130 °C)	1.30385	5
B*	1204.84	5
K		
c		
t_k to t_x °C		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (140 to t_c °C)	7.23831	5
Bc	1570.2	5
Cc	251.5	5
Cryos. consts. A°	0.0467	2
B°		
t_e °C	120.58	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6359	4
BP	0.04646	2
t_e	0.0364	5
30 mm	0.6432	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.21	2
30 mm	80.03	4
BP	68.60	2
t_e	67.08	5
t_e (d, e)	67.04	5
$ΔHv/T_e$	19.46	5
d (25 to 120 °C)	83.39	4
e	0.1355	4
d' (to °C)		
e'		
d_c g/ml	0.239	2
v_c ml/g	4.185	2
t_c °C	279.	2
P_c mm	19000.	2
PV/RT 25°C	0.9904	5
30 mm	1.0000	5
BP	0.9585	4
t_e	0.9495	5
t_c	0.264	2
ΔHc kcal/m	1219.37	2
ΔHf	-62.26	2
ΔFf	0.59	2
Viscosity centistokes η 15 °C	0.7340	3
30	0.6305	3
B^v (to °C)		
A^v		
$(B^v)l$ (to °C)		
$(A^v)l$		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0445	5
g	0.0013	5
h	-0.0_637	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' (700 to 1000 °K)	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	19.73	2
30	18.82	2
40	17.92	2
Parachor [P] 20°C	346.8	4
30	347.6	4
40		
Sugd.	346.2	5
Exp. L. l. %/wt. u.		
Dispersion	99.0	2
Flash Point °C	1.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Timmermans

No. 32

NAME	3, 3-Dimethylhexane	STRUCTURAL FORMULA
		$CH_3CH_2C(CH_3)_2-(CH_2)_2CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{18}	Molecular Weight 114.224

		Ref.
F.P. °C	-126.10	2
F.P. 100%		
B.P. °C 760 mm	111.969	2
100	52.16	2
30	25.93	4
10	6.1	2
1	-27.	5
Pressure mm 25°C	28.611	5
t_e	1053.406	5
Density g/ml 20°C	0.71000	2
d^t_4 25	0.70596	2
30	0.70192	4
a	0.72614	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.40009	2
25	1.39782	2
30	1.39526	4
"C"	0.7513	4
MR (Obs.)	39.009	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04509	2
Dielectric		
A 25 to 140 °C	6.85121	2
B	1307.882	2
C	217.439	2
A* 25 to 135 °C	1.28231	5
B*	1221.27	5
K		
c		
t_k to t_x °C		
A' 0 to 35 °C	7.2390	5
B'	1503.4	5
C'	235.	5
A'* 10 to 35 °C	1.64796	5
B'*	1404.8	5
Ac 140 to t_c °C	7.26174	5
Bc	1617.9	5
Cc	257.6	5
Cryos. consts. A°	0.04	2
B°		
t_e °C	124.168	5

		Ref.
dt/dP °C/mm 25°C	0.6825	4
BP	0.04741	2
t_e	0.03679	5
30 mm	0.65557	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.20	4
30 mm	79.15	5
BP	68.5	2
t_e	66.89	5
t_e (d, e)	66.99	5
ΔHv/T_e	19.26	5
d 25 to 125 °C	82.36	4
e	0.1238	4
d' 10 to 25 °C	80.61	5
e'	0.0563	5
d_c g/ml	0.254	2
v_c ml/g	3.940	2
t_c °C	277.9	5
P_c mm	17388.	5
PV/RT 25°C	1.0000	4
30 mm	1.0000	5
BP	0.96198	4
t_e	0.95282	5
t_c	0.264	2
ΔHc kcal/m	1219.97	2
ΔHf	-61.58	2
ΔFf	1.23	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600°K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000°K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. 20°C	20.63	2
γ 30	19.72	2
40	18.81	2
Parachor [P] 20°C	342.9	4
30	343.0	4
40	343.0	4
Sugd.	346.2	5
Exp. L. 1. %/wt. u.		
Dispersion	97.3	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 33

NAME	3, 4-Dimethylhexane

STRUCTURAL FORMULA

$CH_3CH_2CH(CH_3)CH(CH_3)CH_2CH_3$

Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	117.725	2
100	57.693	2
30	31.31	4
10	11.3	2
1	-22.33	4
Pressure mm 25°C	21.64	4
t_e	1066.3	5
Density g/ml 20°C	0.71923	2
d^t_4 25	0.71516	2
30	0.71108	4
a	0.73550	4
b	-0.0₃81	4
Ref. Index n_D 20°C	1.40406	2
25	1.40180	2
30	1.39901	4
"C"	0.7486	4
MR (Obs.)	38.845	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04444	2
Dielectric	1.971	5
A 30 to 155 °C	6.87986	2
B	1330.035	2
C	214.863	2
A* 30 to 140 °C	1.31108	5
B*	1244.36	5
K		
c		
t_k to t_x °C		
A' 0 to 30 °C	7.27803	5
B'	1533.24	5
C'	233.	5
A'* 10 to 30 °C	1.68498	5
B'*	1434.84	5
Ac 155 to t_c °C	7.33062	5
Bc	1684.6	5
Cc	261.3	5
Cryos. consts. A°		
B°		
t_e °C	130.424	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8713	4
BP	0.04752	2
t_e	0.03643	5
30 mm	0.6596	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.65	2
30 mm	81.52	5
BP	70.20	2
t_e	68.72	5
t_e (d, e)	68.55	5
$\Delta Hv/T_e$	20.08	5
d 30 to 130 °C	85.63	5
e	0.1310	5
d' to °C		
e'		
d_c g/ml	0.253	2
v_c ml/g	3.957	2
t_c °C	298.	2
P_c mm	20824.	2
PV/RT 25°C	1.0002	5
30 mm	1.0000	5
BP	0.9593	4
t_e	0.9496	5
t_c	0.264	2
ΔHc kcal/m	1221.68	2
ΔHf	-60.23	2
ΔFf	2.03	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f 300 to 600 °K	0.0445	5
g	0.0013	5
h	-0.0₆37	5
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0₆46	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0₆40	4
Surface tension dynes/cm. γ 20°C	21.64	2
30	20.71	2
40	19.79	2
Parachor [P] 20°C	343.3	4
30	343.2	4
40	342.6	4
Sugd.	346.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	96.6	2
Flash Point °C	4.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	3-Ethyl-2-methylpentane
Mole % Pur.	99.995 (Ref. 2)
Molecular Formula	C_8H_{18}
Molecular Weight	114.224

STRUCTURAL FORMULA

$CH_3CH(CH_3)CH(C_2H_5)CH_2CH_3$

Property	Value	Ref.
F.P. °C	-114.960	2
F.P. 100%		
B.P. °C 760 mm	115.650	2
100	55.712	2
30	29.40	4
10	9.5	2
1	-26.1	4
Pressure mm 25°C	23.92	4
t_e	1063.7	5
Density g/ml 20°C	0.71932	2
d_4^t 25	0.71522	2
30	0.71111	4
a	0.73571	4
b	-0.0₃814	4
Ref. Index n_D 20°C	1.40401	2
25	1.40167	2
30	1.39910	4
"C"	0.7486	4
MR (Obs.)	38.836	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04435	2
Dielectric	1.971	5
A (25 to 150 °C)	6.86358	2
B	1318.120	2
C	215.306	2
A* (25 to 140 °C)	1.29252	5
B*	1231.73	5
K		
c		
t_k to t_x °C		
A' (0 to 30 °C)	8.55861	4
B'	2278.23	4
C'	292.312	4
A'* (10 to 30 °C)	2.88842	4
B'*	2132.76	4
Ac (150 to t_c °C)	7.40735	5
Bc	1749.0	5
Cc	271.2	5
Cryos. consts. A°	0.0544	2
B°		
t_e °C	128.25	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8023	4
BP	0.04748	2
t_e	0.0366	5
30 mm	0.6577	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.60	2
30 mm	80.74	5
BP	69.70	2
t_e	68.11	5
t_e (d, e)	68.09	5
ΔHv/T_e	19.38	5
d (25 to 130 °C)	84.51	4
e	0.1280	4
d' (to °C)		
e'		
d_c g/ml	0.254	2
v_c ml/g	3.940	2
t_c °C	295.	2
P_c mm	20824.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9618	4
t_e	0.9524	5
t_c	0.264	2
ΔHc kcal/m	1222.11	2
ΔHf	-59.69	2
ΔFf	3.03	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0445	5
g	0.0013	5
h	-0.0₆37	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0265	4
n	0.0014	4
o	-0.0₆46	4
m' (700 to 1000 °K)	0.1079	4
n'	0.0012	4
o'	-0.0₆40	4
Surface tension dynes/cm. γ 20°C	21.52	2
30	20.58	2
40	19.65	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.I.%/wt. u.		
Dispersion	96.1	2
Flash Point °C	3.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 35

NAME	3-Ethyl-3-methylpentane	STRUCTURAL FORMULA
Mole % Pur. 99.995 (Ref. 2)	Molecular Formula C_8H_{18} ; Molecular Weight 114.224	$CH_3CH_2C(CH_3)(C_2H_5)CH_2CH_3$

		Ref.
F.P. °C	-90.870	2
F.P. 100%		
B.P. °C 760 mm	118.259	2
100	57.103	2
30	30.25	4
10	9.9	2
1	-25.9	4
Pressure mm 25°C	23.01	5
t_e	1072.7	5
Density g/ml 20°C	0.72742	2
d_4^t 25	0.72354	2
30	0.71965	4
a	0.74293	4
b	-0.0_377	4
Ref. Index n_D 20°C	1.40775	2
25	1.40549	2
30	1.40316	4
"C"	0.7466	4
MR (Obs.)	38.717	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04404	2
Dielectric	1.982	5
A 30 to 160 °C	6.86731	2
B	1347.209	2
C	219.684	2
A* 30 to 140 °C	1.28717	5
B*	1257.01	5
K		
c		
t_k to		
t_x °C		
A' 0 to 30 °C	8.17016	5
B'	2077.18	5
C'	280.096	5
A'* 10 to	2.51548	5
B'* 30 °C	1942.04	5
Ac 160 to t_c °C	7.49210	5
Bc	1864.1	5
Cc	286.7	5
Cryos. consts. A°	0.0392	2
B°		
t_e °C	131.44	5

		Ref.
dt/dP °C/mm 25°C	0.8459	4
BP	0.04844	2
t_e	0.0370	5
30 mm	0.6713	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.49	2
30 mm	79.55	4
BP	69.30	2
t_e	67.75	5
t_e (d, e)	67.76	5
ΔHv/T_e	19.12	5
d 30 to 130 °C	83.08	5
e	0.1165	5
d' to °C		
e'		
d_c g/ml	0.263	2
v_c ml/g	3.808	2
t_c °C	305.	2
P_c mm	21964.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9625	4
t_e	0.9528	5
t_c	0.265	2
ΔHc kcal/m	1221.20	2
ΔHf	-60.46	2
ΔFf	2.69	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

		Ref.
f 300 to 600 °K	0.0445	5
g	0.0013	5
h	-0.0_637	5
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	21.99	2
30	21.07	2
40	20.15	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.8	2
Flash Point °C	6.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 36

NAME	2, 2, 3-Trimethylpentane			STRUCTURAL FORMULA
Mole % Pur. 99.88	Ref. 2	Molecular Formula C_8H_{18}	Molecular Weight 114.224	$CH_3C(CH_3)_2$ - CH CH_2CH_3 (with CH_3 on CH): CH_3CH_3 / CH_3C - CH CH_2CH_3 / CH_3

Property	Value	Ref.
F.P. °C	-112.27	2
F.P. 100%		
B.P. °C 760 mm	109.841	2
100	49.922	2
30	23.69	4
10	3.9	2
1	-28.7	4
Pressure mm 25°C	32.06	4
t_e	1043.0	5
Density g/ml 20°C	0.71602	2
d_4^t 25	0.71207	2
30	0.70811	4
a	0.73180	4
b	-0.0_3781	4
Ref. Index n_D 20°C	1.40295	2
25	1.40066	2
30	1.39811	4
"C"	0.7500	4
MR (Obs.)	38.925	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04494	2
Dielectric	1.968	5
A (20 to 150 °C)	6.82546	2
B	1294.875	2
C	218.420	2
A* (20 to 130 °C)	1.26422	5
B*	1209.78	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (150 to t_c °C)	7.29189	5
Bc	1663.7	5
Cc	267.9	5
Cryos. consts. A°	0.0401	2
B°		
t_e °C	121.69	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6199	4
BP	0.04755	2
t_e	0.0372	5
30 mm	0.6553	4
ΔHm cal/g		
ΔHv cal/g 25°C	77.24	2
30 mm	78.00	4
BP	67.30	2
t_e	65.84	5
t_e (d, e)	65.83	5
ΔHv/T_e	19.05	5
d (25 to 120 °C)	80.94	4
e	0.1242	4
d' (to °C)		
e'		
d_c g/ml	0.261	2
v_c ml/g	3.826	2
t_c °C	294.	2
P_c mm	21432.	2
PV/RT 25°C	0.9925	5
30 mm	1.0000	5
BP	0.9585	4
t_e	0.9493	5
t_c	0.265	2
ΔHc kcal/m	1219.98	2
ΔHf	-61.44	2
ΔFf	2.22	2
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Range	Value	Ref.
f	300 to 600°K	0.0445	5
g		0.0013	5
h		-0.0_637	5
f'	to °K		
g'			
h'			
m	300 to 600°K	0.0265	4
n		0.0014	4
o		-0.0_646	4
m'	700 to 1000°K	0.1079	4
n'		0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm. γ 20°C		20.67	2
30		19.77	5
40		18.87	5
Parachor [P] 20°C			
30			
40			
Sugd.		346.2	5
Exp. L. 1.%/wt.			
u.			
Dispersion		97.2	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

T_R = 0.75 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 37

NAME	2,2,4-Trimethylpentane	STRUCTURAL FORMULA
	Isooctane	$CH_3C(CH_3)_2CH_2CH(CH_3)CH_3$
Mole % Pur.	Ref.	Molecular Formula C_8H_{18}	Molecular Weight 114.224

Property		Ref.
F.P. °C	-107.380	2
F.P. 100%		
B.P. °C 760 mm	99.238	2
100	40.667	2
30	15.05	4
10	-4.3	2
1	-36.1	4
Pressure mm 25°C	49.34	4
t_e	1009.4	5
Density g/ml 20°C	0.69192	2
d^t_4 25	0.68777	2
30	0.68361	4
a	0.70850	4
b	-0.0_3817	4
Ref. Index n_D 20°C	1.39145	2
25	1.38901	2
30	1.38646	5
"C"	0.7552	4
MR (Obs.)	39.262	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04549	2
Dielectric	1.936	5
A 15 to 135 °C	6.81189	2
B	1257.840	2
C	220.735	2
A* 15 to 120 °C	1.26590	5
B*	1175.54	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 135 to t_c °C	7.27905	5
Bc	1612.2	5
Cc	267.7	5
Cryos. consts. A°	0.04031	2
B°	0.0043	2
t_e °C	109.60	5

Property		Ref.
dt/dP °C/mm 25°C	0.4226	4
BP	0.04651	2
t_e	0.03732	5
30 mm	0.6398	4
ΔHm cal/g		
ΔHv cal/g 25°C	73.50	2
30 mm	75.31	4
BP	64.87	2
t_e	63.60	5
t_e (d, e)	63.59	5
ΔHv/T_e	18.98	5
d 15 to 110 °C	77.17	5
e	0.1240	5
d' to		
e' °C		
d_c g/ml	0.237	2
v_c ml/g	4.220	2
t_c °C	271.15	2
P_c mm	19380.	2
PV/RT 25°C	0.9910	4
30 mm	1.0000	5
BP	0.9562	4
t_e	0.9478	5
t_c	0.275	2
ΔHc kcal/m	1219.01	2
ΔHf	-61.97	2
ΔFf	1.65	2
Viscosity centistokes η 20 °C	0.7259	1
40	0.5958	1
60	0.4999	1
80	0.4270	1
B^v 30 to 90 °C	400.09	4
A^v	$\bar{2}$.49766	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	18.77	2
30	17.88	2
40	16.99	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	100.5	2
Flash Point °C	-12.	3
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	1772.	1
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\, T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NFPA 325

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 38

NAME	2, 3, 3-Trimethylpentane	STRUCTURAL FORMULA
Mole % Pur. 99.87, Ref. 2	Molecular Formula C_8H_{18}; Molecular Weight 114.224	$CH_3CH(CH_3)C(CH_3)_2CH_2CH_3$

Property	Value	Ref.
F.P. °C	-100.70	2
F.P. 100%		
B.P. °C 760 mm	114.760	2
100	53.815	2
30	27.10	4
10	6.9	2
1	-33.15	4
Pressure mm 25°C	27.00	4
t_e	1060.3	5
Density g/ml 20°C	0.72619	2
d^t_4 25	0.72232	2
30	0.71844	4
a	0.74166	4
b	-0.0₃767	4
Ref. Index n_D 20°C	1.40750	2
25	1.40522	2
30	1.40291	4
"C"	0.7474	4
MR (Obs.)	38.762	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04440	2
Dielectric	1.981	5
A (25 to 160 °C)	6.84353	2
B	1328.046	2
C	220.375	2
A* (25 to 140 °C)	1.27011	5
B*	1239.27	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (160 to t_c °C)	7.38917	5
Bc	1774.2	5
Cc	279.5	5
Cryos. consts. A°	0.0062	2
B°		
t_e °C	127.46	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7357	4
BP	0.04833	2
t_e	0.0373	5
30 mm	0.6676	4
ΔHm cal/g		
ΔHv cal/g 25°C	77.87	2
30 mm	78.34	4
BP	68.10	2
t_e	66.61	5
t_e (d, e)	66.62	5
$\Delta Hv/T_e$	18.99	5
d (25 to 125 °C)	81.50	5
e	0.1168	5
d' to °C		
e'		
d_c g/ml	0.264	2
v_c ml/g	3.791	2
t_c °C	303.	2
P_c mm	22040.	2
PV/RT 25°C	1.0002	5
30 mm	1.0000	5
BP	0.9607	4
t_e	0.9512	5
t_c	0.266	2
ΔHc kcal/m	1220.86	2
ΔHf	-60.63	2
ΔFf	2.54	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. 300°K	0.39891	5
400	0.50224	5
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0445	5
g	0.0013	5
h	-0.0₆37	5
f' to °K		
g'		
h'		
m (300 to 600 °K)	0.0265	4
n	0.0014	4
o	-0.0₆46	4
m' (700 to 1000 °K)	0.1079	4
n'	0.0012	4
o'	-0.0₆40	4
Surface tension dynes/cm. γ 20°C	21.56	2
30	20.65	2
40	19.75	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.1	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 Tc

*+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	2, 3, 4-Trimethylpentane	STRUCTURAL FORMULA
Mole % Pur. 99.89 / Ref. 2	Molecular Formula C_8H_{18} / Molecular Weight 114.224	CH_3 CH_3 CH_3 CH_3CH CH CH CH_3

		Ref.
F.P. °C		
F.P. 100%	-109.210	2
B.P. °C 760 mm	113.467	2
100	53.404	2
30	27.06	4
10	7.1	2
1	-25.65	4
Pressure mm 25°C	27.01	4
t_e	1051.	5
Density g/ml 20°C	0.71906	2
d^t_4 25	0.71503	2
30	0.71099	4
a	0.73517	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.40422	2
25	1.40198	2
30	1.39931	4
"C"	0.7491	4
MR (Obs.)	38.868	2
MR (Calc.)	39.144	5
(nD-d/2)	1.04469	2
Dielectric	1.972	5
A 25 to 150 °C	6.85396	2
B	1315.084	2
C	217.526	2
A* 25 to 135 °C	1.29238	5
B*	1230.23	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 150 to t_c °C	7.33497	5
Bc	1695.6	5
Cc	267.7	5
Cryos. consts. A°	0.04147	2
B°	0.0035	2
t_e °C	125.62	5

		Ref.
dt/dP °C/mm 25°C	0.7192	4
BP	0.04761	2
t_e	0.0370	5
30 mm	0.6585	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.52	5
30 mm	79.39	5
BP	68.37	2
t_e	66.45	5
t_e (d,e)	66.82	5
$\Delta Hv/T_e$	19.04	5
d 20 to 120 °C	82.84	5
e	0.1276	5
d' to e' °C		
d_c g/ml	0.256	2
v_c ml/g	3.913	2
t_c °C	295.	2
P_c mm	20976.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9566	4
t_e	0.9470	5
t_c	0.265	2
ΔHc kcal/m	1220.61	2
ΔHf	-60.98	2
ΔFf	2.54	2
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0265	4
n	0.0014	4
o	-0.0_646	4
m' 700 to 1000 °K	0.1079	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. 20°C γ	21.14	2
30	20.22	2
40	19.31	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.9	2
Flash Point °C	2.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II; Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 40

NAME	2, 2, 3, 3-Tetramethylbutane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{18} / Molecular Weight 114.224	CH_3CH_3 / $CH_3C - C - CH_3$ / CH_3CH_3

Property	Value	Ref.
F.P. °C	+100.69	2
F.P. 100%		
B.P. °C 760 mm	106.47	2
100	54.70≠	3
30	31.33≠	2
10	13.09≠	3
1	-18.03≠	3
Pressure mm 25°C	20.854	3
t_e	1035.	5
Density g/ml 23°C	0.8242≠	3'
d^t_4 25	0.8215	3'
30	0.8188	3'
a	0.8352≠	4
b	-0.0354	4
Ref. Index n_D 20°C	1.4695	3'
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	39.144	5
Dielectric		
A (101 to 160 °C)	6.87665	2
B	1327.8	2
C	226.0	2
A* (101 to 135 °C)	1.31013	5
B*	1238.8	5
K		
c		
t_k to t_x °C		
A' (-20 to 101 °C)	7.92864≠	3
B'	1709.428	3
C'	233.634	3
A'* -20 to	1.59522	5
B'* 101 °C	1620.5	5
Ac (160 to t_c °C)	8.79823	5
Bc	3213.7	5
Cc	438.9	5
Cryos. consts. A°	0.00613	2
B°		
t_e °C	117.83	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8149	4
BP	0.0476	3
t_e	0.0373	5
30 mm	0.6604	4
ΔHm cal/g		
ΔHv cal/g 25°C	89.36#	2
30 mm	75.46	4
BP	66.2	2
t_e	65.02	5
t_e (d, e)	64.92	5
ΔHv/T_e	19.80	5
d (20 to 120 °C)	78.03	5
e	0.1113	5
d' to e' °C		
d_c g/ml	0.239	2
v_c ml/g	4.189	2
t_c °C	270.8	2
P_c mm	18620.	3
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9599	4
t_e	0.9515	5
t_c	0.262	4
ΔHc kcal/m	1218.59	2
ΔHf	-64.23	2
ΔFf	3.13	2
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. 20°C	0.5893#	3
40	0.497	3
c_p vap. 300°K	0.39703	2
400	0.50217	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	-0.0414	4
n	0.0017	4
o	-0.0_675	4
m' (700 to 1000 °K)	0.1205	4
n'	0.0013	4
o'	-0.0_646	4
Surface tension dynes/cm. γ 20°C	21.14	2
30	20.22	2
40	19.31	2
Parachor [P] 20°C		
30		
40		
Sugd.	346.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ solid state   ‡104.9°C   # heat of sublimation T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API, Lit.

PURIFICATION: API, Lit.

LITERATURE REFERENCES: 3 JACS 74, 883 (1952) D. W. Scott et al; 3' JACS 71, 3447 (1949) Wm. F. Seyer et al.

No. 41

NAME	n-Nonane	STRUCTURAL FORMULA
Mole % Pur. 99.997 (Ref. 2)	Molecular Formula C_9H_{20} ; Molecular Weight 128.250	$CH_3(CH_2)_7CH_3$

Property	Value	Ref.
F.P. °C	-53.519	2
F.P. 100%		
B.P. °C 760 mm	150.798	2
100	87.899	2
30	60.16	4
10	39.0	2
1	3.6	5
Pressure mm 25°C	4.351	5
t_e	1127.4	5
Density g/ml 20°C	0.71763	2
d^t_4 25	0.71381	2
30	0.70999	4
a	0.73290	4
b	-0.0_3762	4
Ref. Index n_D 20°C	1.40542	2
25	1.40311	2
30	1.39984	4
"C"	0.7509	4
MR (Obs.)	43.842	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04660	2
Dielectric	1.972	3
A (60 to 185 °C)	6.93513	2
B	1428.811	2
C	201.619	2
A* (60 to 180 °C)	1.43093	4
B*	1351.7	4
K	24.	5
c	-0.15644	5
t_k (180 to 270 °C)	227.	5
t_x	381.	5
A' (20 to 60 °C)	7.30801	5
B'	1630.71	5
C'	219.5	5
A'* 20 to 60 °C	1.76177	5
B'*	1536.61	5
Ac (185 to t_c °C)	7.43583	5
Bc	1842.3	5
Cc	254.0	5
Cryos. consts. A°	0.03856	3[2]
B°		
t_e °C	166.351	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.660	5
BP	0.04967	2
t_e	0.0365	5
30 mm	0.6943	4
ΔHm cal/g	28.83	3[2]
ΔHv cal/g 25°C	86.54	2
30 mm	82.67	4
BP	68.44	4
t_e	66.42	5
t_e (d, e)	66.00	5
$\Delta Hv/T_e$	19.38	5
d (60 to 165 °C)	92.11	4
e	0.1570	4
d' (10 to 60 °C)	89.29	4
e'	0.1102	4
d_c g/ml	0.244	2
v_c ml/g	4.094	2
t_c °C	322.	2
P_c mm	17279.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9380	4
t_e	0.9482	5
t_c	0.250	2
ΔHc kcal/m	1369.70	2
ΔHf		
ΔFf		
Viscosity centistokes η 80 °C	0.5502	2
100	0.4743	2
120	0.4151	2
140	0.3675	2
B^v (30 to 90 °C)	437.7	4
A^v	$\bar{2}.50135$	4
(B^v) (90 to 150 °C)	427.1	4
(A^v)	$\bar{2}.53159$	4
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.92	2
30	21.95	2
40	21.00	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt.	3.2	3'
u.	11.8	3'
Dispersion	97.2	2
Flash Point °C	31.0	3'
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in † Acetone	∞	1
Carbon tet.	∞	1
Benzene	∞	1
Ether	∞	1
n-Heptane	∞	1
Ethanol	∞	1
Water		
Water in		
Viscosity centistokes 40°C	0.7921	2
60	0.6515	2
110	0.4430	2
150	0.3473	2

$T_R = 0.77\ T_C$ † grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514; 3' NFPA Circ.; 3[2] JACS 76, 333 (1954) Finke et al.

No. 42

NAME	2-Methyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}
Molecular Weight 128.250		$CH_3CH(CH_3)(CH_2)_5CH_3$

Property	Value	Ref.
F.P. °C	-80.4	2
F.P. 100%		
B.P. °C 760 mm	143.26	2
100	81.0	2
30	53.15	4
10	32.2	2
1	-2.5	5
Pressure mm 25°C	6.554	5
t_e	1142.	5
Density g/ml 20°C	0.7134	2
d^t_4 25	0.7095	2
30	0.7056	4
a	0.7290	4
b	-0.0_3778	4
Ref. Index n_D 20°C	1.4031	2
25	1.4008	2
30	1.3983	4
"C"	0.7530	4
MR (Obs.)	43.88	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0464	2
Dielectric	1.969	5
A (50 to 175 °C)	6.9179	2
B	1410.0	2
C	206.0	2
A* (50 to 170 °C)	1.3740	5
B*	1321.0	5
K		
c		
t_k (to °C)		
t_x		
A' (20 to 50 °C)	7.0924	5
B'	1501.9	5
C'	214.3	5
A'* 20 to	1.5590	5
B'* 50 °C	1412.9	5
Ac (175 to t_c °C)	7.39626	5
Bc	1799.9	5
Cc	255.7	5
Cryos. consts. A°		
B°		
t_e °C	159.28	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.527	5
BP	0.0494	2
t_e	0.0360	5
30 mm	0.6895	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.2	2
30 mm	79.78	4
BP	68.3	2
t_e	66.31	5
t_e (d, e)	66.26	5
$\Delta Hv/T_e$	19.67	5
d (55 to 160 °C)	86.55	4
e	0.1274	4
d' (10 to 55 °C)	86.24	4
e'	0.1216	4
d_c g/ml		
v_c ml/g		
t_c °C	311.0	5
P_c mm	16595.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9610	4
t_e	0.9495	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap. 15.6°C	0.381	3

Property	Value	Ref.
f (300 to 600 °K)	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	21.88	2
30	20.94	2
40	20.00	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. 1.%/wt.	0.74	3
u.	2.9	3
Dispersion	98.4	2
Flash Point °C	32.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.77\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 ASTM Spec. Tech. Pub. No. 109

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 43

NAME	3-Methyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}
Molecular Weight 128.250		$CH_3CH_2CH(CH_3)(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C	-107.6	2
F.P. 100%		
B.P. °C 760 mm	144.18	2
100	81.	2
30	53.71	4
10	33.	2
1	-2.1	5
Pressure mm 25°C	6.367	5
t_e	1149.4	5
Density g/ml 20°C	0.7207	2
d^t_4 25	0.7168	2
30	0.7129	4
a	0.7363	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4062	2
25	1.4039	2
30	1.4016	4
"C"	0.7508	4
MR (Obs.)	43.73	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0459	2
Dielectric	1.977	5
A 50 to 195 °C	6.9102	2
B	1411.0	2
C	206.0	2
A* 50 to 170 °C	1.3601	5
B*	1320.40	5
K		
c		
t_k to °C		
t_x		
A' 20 to 50 °C	7.0418	5
B'	1480.2	5
C'	212.3	5
A'* 20 to 50 °C	1.5108	5
B'*	1392.5	5
Ac 195 to t_c °C	7.38835	5
Bc	1803.0	5
Cc	256.2	5
Cryos. consts. A°		
B°		
t_e °C	160.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.595	5
BP	0.04966	4
t_e	0.0360	5
30 mm	0.6920	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.4	2
30 mm	79.76	4
BP	68.5	2
t_e	66.51	5
t_e (d, e)	66.47	5
ΔHv/T_e	19.67	5
d 50 to 160 °C	86.45	4
e	0.1245	4
d' 10 to 50 °C	86.57	4
e'	0.1267	4
d_c g/ml		
v_c ml/g		
t_c °C	313.8	5
P_c mm	16791.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9638	4
t_e	0.9525	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f 300 to 600 °K	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.34	2
30	21.40	2
40	20.46	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.5	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.77\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 44

NAME	4-Methyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3(CH_2)_2CH(CH_3)(CH_2)_3CH_3$

		Ref.
F.P. °C	-113.2	2
F.P. 100%		
B.P. °C 760 mm	142.48	2
100	80.	2
30	52.53	4
10	32.	2
1	-2.80	5
Pressure mm 25°C	6.756	5
t_e	1141.1	5
Density g/ml 20°C	0.7199	2
d^t_4 25	0.7160	2
30	0.7121	4
a	0.7355	5
b	-0.0_3778	5
Ref. Index n_D 20°C	1.4061	2
25	1.4038	2
30	1.4015	4
"C"	0.7515	4
MR (Obs.)	43.77	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0462	2
Dielectric	1.977	5
A 50 to 165 °C	6.9155	2
B	1406.0	2
C	206.0	2
A* 50 to 170 °C	1.3714	5
B*	1317.0	5
K		
c		
t_k to		
t_x °C		
A' 20 to 55 °C	6.9689	5
B'	1433.8	5
C'	208.5	5
A'* 20 to	1.4441	5
B'* 55 °C	1348.9	5
Ac 165 to t_c °C	7.39191	5
Bc	1794.2	5
Cc	255.6	5
Cryos. A° consts. B°		
t_e °C	158.42	5

		Ref.
dt/dP °C/mm 25°C	2.445	5
BP	0.049	2
t_e	0.0360	5
30 mm	0.6882	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.4	2
30 mm	79.63	4
BP	68.2	2
t_e	66.23	5
t_e (d, e)	66.17	5
ΔHv/T_e	19.68	5
d 55 to 160 °C	86.30	4
e	0.1271	4
d' 10 to 55 °C	86.82	4
e'	0.1370	4
d_c g/ml		
v_c ml/g		
t_c °C	311.0	5
P_c mm	16810.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9615	4
t_e	0.9502	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^V to °C		
A^V		
(B^V) to		
(A^V) °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

			Ref.
f	300 to 600 °K	0.0496	5
g		0.0013	5
h		-0.0_635	5
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0294	4
n		0.0015	4
o		-0.0_652	4
m'	700 to 1000 °K	0.1222	4
n'		0.0013	4
o'		-0.0_645	4
Surface tension dynes/cm. γ	20°C	22.34	2
	30	21.40	2
	40	20.46	2
Parachor [P]	20°C		
	30		
	40		
	Sugd.	385.2	5
Exp. L.I.%/wt.			
u.			
Dispersion		97.5	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

T_R = 0.77 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 45

NAME	3-Ethylheptane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250

Structural formula: $CH_3CH_2CH(C_2H_5)(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	143.0	2
100	80.3	2
30	52.7	4
10	32.	2
1	-2.65	5
Pressure mm 25°C	6.715	5
t_e	1152.5	5
Density g/ml 20°C	0.727	2
d_4^t 25	0.723	2
30	0.719	4
a	0.743	4
b	-0.0_3798	4
Ref. Index n_D 20°C	1.4093	2
25	1.4070	2
30	1.4045	4
"C"	0.7496	4
MR (Obs.)	43.6	2
MR (Calc.)	43.762	5
(nD-d/2)	1.046	2
Dielectric	1.986	5
A (50 to 195 °C)	6.901	2
B	1403.	2
C	206.	2
A* (50 to 170 °C)	1.344	5
B*	1311.	5
K		
c		
t_k to t_x °C		
A' (25 to 55 °C)	6.878	5
B'	1391.	5
C'	205.	5
A'* 25 to	1.358	5
B'* 55 °C	1309.	5
Ac (195 to t_c °C)	7.37800	5
Bc	1793.5	5
Cc	256.2	5
Cryos. consts. A°		
B°		
t_e °C	159.42	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.457	5
BP	0.0496	4
t_e	0.0359	5
30 mm	0.6904	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.5	2
30 mm	79.44	4
BP	68.5	2
t_e	66.55	5
t_e (d, e)	66.51	5
ΔHv/T_e	19.73	5
d (50 to 160 °C)	85.82	4
e	0.1211	4
d' (10 to 50 °C)	87.17	5
e'	0.1467	5
d_c g/ml		
v_c ml/g		
t_c °C	313.1	5
P_c mm	16895.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9682	4
t_e	0.9575	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Range	Value	Ref.
f	300 to 600 °K	0.0496	5
g		0.0013	5
h		-0.0_635	5
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0294	4
n		0.0015	4
o		-0.0_652	4
m'	700 to 1000 °K	0.1222	4
n'		0.0013	4
o'		-0.0_645	4
Surface tension dynes/cm. γ 20°C		22.81	2
30		21.87	2
40		20.93	2
Parachor [P] 20°C			
30			
40			
Sugd.		385.2	5
Exp. L.1.%/wt. u.			
Dispersion		96.6	2
Flash Point °C		28.	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in[+] Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

T_R = 0.77 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 46

NAME	4-Ethylheptane
Mole % Pur.	Ref.
Molecular Formula	C_9H_{20}
Molecular Weight	128.250

STRUCTURAL FORMULA

$$CH_3(CH_2)_2\underset{}{\overset{C_2H_5}{CH}}(CH_2)_2CH_3$$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	141.2	2
100	79.	2
30	51.4	4
10	31.	2
1	-3.41	5
Pressure mm 25°C	7.174	5
t_e	1147.7	5
Density g/ml 20°C	0.730	2
d^t_4 25	0.726	2
30	0.722	4
a	0.746	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.4096	2
25	1.4073	2
30	1.4049	4
"C"	0.7472	4
MR (Obs.)	43.5	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0446	2
Dielectric	1.987	5
A (50 to 190 °C)	6.905	2
B	1397.	2
C	206.	2
A* (50 to 170 °C)	1.350	5
B*	1305.	5
K		
c		
t_k (to °C)		
t_x		
A' (20 to 55 °C)	6.782	5
B'	1334.	5
C'	200.	5
A'* (20 to 55 °C)	1.270	5
B'*	1255.	5
Ac (190 to t_c °C)	7.38178	5
Bc	1785.7	5
Cc	256.0	5
Cryos. A° consts. B°		
t_e °C	157.31	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.3002	5
BP	0.050	2
t_e	0.0358	5
30 mm	0.6864	4
ΔHm cal/g		
ΔHv cal/g 25°C	83.5	2
30 mm	79.27	4
BP	68.3	2
t_e	66.43	5
t_e (d, e)	66.33	5
ΔHv/T_e	19.79	5
d (50 to 155 °C)	85.54	4
e	0.1221	4
d' (10 to 50 °C)	87.51	4
e'	0.1605	4
d_c g/ml		
v_c ml/g		
t_c °C	311.0	5
P_c mm	17072.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9676	4
t_e	0.9582	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f (300 to 600°K)	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' (to °K)		
g'		
h'		
m (300 to 600°K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000°K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.81	2
30	21.87	2
40	20.93	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.I.%/wt.		
u.		
Dispersion	96.6	2
Flash Point °C	26.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.8 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 47

NAME	2,2-Dimethylheptane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250

Structural formula: $CH_3C(CH_3)_2(CH_2)_4CH_3$ — CH_3 / CH_3C $(CH_2)_4CH_3$ / CH_3

Property	Value	Ref.
F.P. °C	-113.00	2
F.P. 100%		
B.P. °C 760 mm	132.69	2
100	71.0	4
30	43.82	4
10	23.3	5
1	-11.	5
Pressure mm 25°C	11.06	5
t_e	1097.6	5
Density g/ml 20°C	0.7105	2
d^t_4 25	0.7066	2
30	0.7027	4
a	0.7261	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4016	2
25	1.3993	2
30	1.3964	4
"C"	0.7527	4
MR (Obs.)	43.91	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0464	2
Dielectric		
A 40 to 165 °C	6.8580	2
B	1355.0	2
C	208.00	2
A* 40 to 155 °C	1.34316	5
B*	1272.7	5
K		
c		
t_k to t_x °C		
A' 10 to 45 °C	7.02527	5
B'	1440.55	5
C'	215.8	5
A'* 10 to 45 °C	1.4984	5
B'*	1352.6	5
Ac 165 to t_c °C	7.33533	5
Bc	1733.9	5
Cc	256.9	5
Cryos. consts. A°	0.042	2
B°		
t_e °C	146.94	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.582	5
BP	0.049	2
t_e	0.0368	5
30 mm	0.6775	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.8	2
30 mm	76.62	4
BP	64.8	2
t_e	63.00	5
t_e (d, e)	62.91	5
$\Delta Hv/T_e$	19.23	5
d 45 to 145 °C	82.44	4
e	0.1330	4
d' 10 to 45 °C	81.70	4
e'	0.1160	4
d_c g/ml		
v_c ml/g		
t_c °C	295.2	5
P_c mm	15656.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9506	4
t_e	0.9390	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f 300 to 600 °K	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	20.80	2
30	19.88	2
40	18.97	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.l.%/wt. u.		
Dispersion	99.5	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra. V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.77 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 48

NAME	2, 3-Dimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH(CH_3)CH(CH_3)-(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	140.5	2
100	78.	2
30	50.3	4
10	29.4	5
1	-5.18	5
Pressure mm 25°C	7.738	5
t_e	1137.3	5
Density g/ml 20°C	0.7260	2
d^t_4 25	0.7221	2
30	0.7182	4
a	0.7416	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4085	2
25	1.4062	2
30	1.4042	4
"C"	0.7500	4
MR (Obs.)	43.63	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0455	2
Dielectric	1.984	5
A (50 to 175 °C)	6.887	2
B	1392.0	2
C	207.0	2
A* (50 to 165 °C)	1.3421	5
B*	1302.4	5
K		
c		
t_k to t_x °C		
A' (10 to 50 °C)	7.0269	5
B'	1464.9	5
C'	213.7	5
A'* 10 to	1.4968	5
B'* 50 °C	1377.	5
Ac (175 to t_c °C)	7.36579	5
Bc	1782.3	5
Cc	257.3	5
Cryos. consts. A°		
B°		
t_e °C	156.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.182	5
BP	0.0496	4
t_e	0.0362	5
30 mm	0.6885	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.6	2
30 mm	78.51	4
BP	67.3	2
t_e	65.44	5
t_e (d, e)	65.33	5
$\Delta Hv/T_e$	19.54	5
d (50 to 155 °C)	84.76	4
e	0.1242	4
d' (10 to 50 °C)	84.66	4
e'	0.1223	4
d_c g/ml		
v_c ml/g		
t_c °C	309.5	5
P_c mm	16649.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9619	4
t_e	0.9517	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f (300 to 600°K)	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' (to °K)		
g'		
h'		
m (300 to 600°K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000°K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.34	2
30	21.40	2
40	20.47	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.l.%/wt. u.		
Dispersion	97.2	2
Flash Point °C	26.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.77\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 49

NAME	2,4-Dimethylheptane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	$CH_3CH(CH_3)-CH_2CH(CH_3)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	133.5	2
100	71.	2
30	44.23	4
10	23.8	5
1	-9.6	5
Pressure mm 25°C	10.738	4
t_e	1131.2	5
Density g/ml 20°C	0.716	2
d_4^t 25	0.712	2
30	0.708	4
a	0.732	4
b	-0.0_3796	4
Ref. Index n_D 20°C	1.4033	2
25	1.4010	2
30	1.398	4
"C"	0.7501	4
MR (Obs.)	43.7	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0453	2
Dielectric		
A (40 to 165 °C)	6.869	2
B	1360.	2
C	208.	2
A* (40 to 160 °C)	1.3129	5
B*	1267.	5
K		
c		
t_k / t_x (to °C)		
A' (25 to 45 °C)	6.7010	5
B'	1277.	5
C'	200.	5
A'* (25 to 45 °C)	1.1957	5
B'*	1199.	5
Ac (165 to t_c °C)	7.34717	5
Bc	1741.6	5
Cc	257.3	5
Cryos. consts. A°		
B°		
t_e °C	148.44	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.606	4
BP	0.049	2
t_e	0.0359	5
30 mm	0.6772	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.9	2
30 mm	76.85	5
BP	65.9	2
t_e	64.85	5
t_e (d, e)	64.07	5
$\Delta Hv/T_e$	19.73	5
d (45 to 150 °C)	82.27	4
e	0.1226	4
d' (10 to 45 °C)	83.87	5
e'	0.1587	5
d_c g/ml		
v_c ml/g		
t_c °C	297.7	5
P_c mm	16179.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9610	5
t_e	0.9642	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	21.30	2
30	20.38	2
40	19.46	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.8	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.77 T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 50

NAME	2,5-Dimethylheptane
STRUCTURAL FORMULA	$CH_3CH(CH_3)(CH_2)_2CH(CH_3)CH_2CH_3$
Mole % Pur.	
Ref.	
Molecular Formula	C_9H_{20}
Molecular Weight	128.250

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	136.0	2
100	74.1	2
30	46.9	4
10	26.2	2
1	-8.4	5
Pressure mm 25°C	9.338	5
t_e	1119.5	5
Density g/ml 20°C	0.715	2
d_4^t 25	0.711	2
30	0.707	4
a	0.731	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.4038	2
25	1.4015	2
30	1.3989	4
"C"	0.7526	4
MR (Obs.)	43.9	2
MR (Calc.)	43.762	5
(nD-d/2)	1.046	2
Dielectric	1.971	5
A (45 to 170 °C)	6.881	2
B	1372.0	2
C	207.	2
A* (45 to 160 °C)	1.3473	5
B*	1285.3	5
K		
c		
t_k to		
t_x °C		
A' (10 to 50 °C)	7.2515	5
B'	1566.6	5
C'	224.4	5
A'* 10 to	1.7094	5
B'* 50 °C	1471.6	5
Ac (185 to t_c °C)	7.35739	5
Bc	1753.3	5
Cc	256.0	5
Cryos. consts. A°		
B°		
t_e °C	151.04	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.847	5
BP	0.049	2
t_e	0.0362	5
30 mm	0.6802	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.9	2
30 mm	77.80	5
BP	66.4	2
t_e	64.56	5
t_e (d, e)	64.48	5
ΔHv/T_e	19.52	5
d (45 to 150 °C)	83.80	4
e	0.1280	4
d' (10 to 45 °C)	82.29	4
e'	0.0957	4
d_c g/ml		
v_c ml/g		
t_c °C	300.7	5
P_c mm	16142.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9591	4
t_e	0.9484	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0496	5
g	0.0013	5
h	-0.0_635	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	21.30	2
30	20.38	2
40	19.46	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.8	2
Flash Point °C	23.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.77 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 51

NAME	2, 6-Dimethylheptane
Mole % Pur.	
Ref.	
Molecular Formula	C_9H_{20}
Molecular Weight	128.250

STRUCTURAL FORMULA

$CH_3CH(CH_2)_3CH-CH_3$ (with CH_3 on each CH)

Property	Value	Ref.
F.P. °C	-102.9	2
F.P. 100%		
B.P. °C 760 mm	135.21	2
100	73.35	4
30	46.18	4
10	25.5	4
1	-8.8	5
Pressure mm 25°C	9.700	5
t_e	1117.7	5
Density g/ml 20°C	0.7089	2
d_4^t 25	0.7049	2
30	0.7009	4
a	0.7249	4
b	$-0.0_{3}80$	4
Ref. Index n_D 20°C	1.4007	2
25	1.3983	2
30	1.3959	4
"C"	0.7536	4
MR (Obs.)	43.92	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0462	2
Dielectric	1.962	5
A (45 to 170 °C)	6.8725	2
B	1366.0	2
C	207.0	2
A* (45 to 160 °C)	1.3392	5
B*	1279.4	5
K		
c		
t_k to		
t_x °C		
A' (10 to 50 °C)	7.1510	5
B'	1510.6	5
C'	220.1	5
A'* 10 to	1.6157	5
B'* 50 °C	1419.0	5
Ac (170 to t_c °C)	7.34814	5
Bc	1741.9	5
Cc	255.7	5
Cryos. consts. A°		
Cryos. consts. B°		
t_e °C	150.20	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.780	5
BP	0.049	2
t_e	0.0363	5
30 mm	0.6793	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.8	2
30 mm	77.55	4
BP	66.2	2
t_e	64.35	5
t_e (d, e)	64.29	5
$\Delta Hv/T_e$	19.49	5
d (45 to 150 °C)	83.44	4
e	0.1275	4
d' (10 to 45 °C)	82.45	4
e'	0.1061	4
d_c g/ml		
v_c ml/g		
t_c °C	298.6	5
P_c mm	15863.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9599	4
t_e	0.9488	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. 300°K	0.39979	5
400	0.50256	5
c_p vap 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f (300 to 600 °K)	0.0496	5
g	0.0013	5
h	$-0.0_{6}35$	5
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	$-0.0_{6}52$	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	$-0.0_{6}45$	4
Surface tension dynes/cm. γ 20°C	20.83	2
30	19.92	2
40	19.00	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.9	2
Flash Point °C	22.0	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.77 Tc

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 52

NAME	3, 3-Dimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH_2C(CH_3)_2-(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	137.3	2
100	74.	2
30	46.9	4
10	26.	2
1	-8.4	5
Pressure mm 25°C	9.453	5
t_e	1124.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.7410	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4085	2
25	1.4062	2
30	1.4037	4
"C"	0.7503	4
MR (Obs.)	43.7	2
MR (Calc.)	43.762	5
(nD-d/2)	1.046	2
Dielectric	1.984	5
A (45 to 170 °C)	6.869	2
B	1385.	2
C	210.	2
A* (45 to 160 °C)	1.3305	5
B*	1296.	5
K		
c		
t_k (to °C)		
t_x		
A' (10 to 50 °C)	6.8930	5
B'	1397.4	5
C'	211.1	5
A'* (10 to 50 °C)	1.3696	5
B'*	1311.9	5
Ac (170 to t_c °C)	7.35298	5
Bc	1779.0	5
Cc	260.9	5
Cryos. consts. A°		
B°		
t_e °C	152.73	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.833	5
BP	0.049	2
t_e	0.0367	5
30 mm	0.6897	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.5	2
30 mm	76.72	5
BP	65.8	2
t_e	64.01	5
t_e (d, e)	63.94	5
$\Delta Hv/T_e$	19.28	5
d (45 to 150 °C)	82.38	4
e	0.1208	4
d' (10 to 45 °C)	82.68	4
e'	0.1271	4
d_c g/ml		
v_c ml/g		
t_c °C	304.5	5
P_c mm	16081.	5
PV/RT 25°C	1.0001	5
30 mm	1.0000	5
BP	0.9591	5
t_e	0.9484	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.01	2
30	21.09	2
40	20.17	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.4	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.77\, T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 53

NAME	3, 4-Dimethylheptane
Mole % Pur.	
Ref.	
Molecular Formula	C_9H_{20}
Molecular Weight	128.250

STRUCTURAL FORMULA

$CH_3CH_2CH(CH_3)CH(CH_3)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	140.6	2
100	78.	2
30	50.31	4
10	29.4	4
1	-5.09	5
Pressure mm 25°C	7.742	5
t_e	1147.	5
Density g/ml 20°C	0.7314	2
d^t_4 25	0.7275	2
30	0.7236	4
a	0.74699	4
b	-0.0_3777	4
Ref. Index n_D 20°C	1.4111	2
25	1.4089	2
30		
"C"	0.7483	4
MR (Obs.)	43.55	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0454	2
Dielectric		
A 50 to	6.897	2
B 175 °C	1400.	2
C	208.0	2
A* 50 to	1.3395	5
B* 165 °C	1306.8	5
K		
c		
t_k to		
t_x °C		
A' 25 to	6.9320	5
B' 50 °C	1418.1	5
C'	209.7	5
A'* 25 to	1.4076	5
B'* 50 °C	1332.9	5
Ac 175 to	7.37833	5
Bc t_c °C	1794.8	5
Cc	258.9	5
Cryos. A°		
consts. B°		
t_e °C	156.83	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.178	5
BP	0.050	2
t_e	0.0360	5
30 mm	0.6899	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.7	2
30 mm	78.35	5
BP	67.8	2
t_e	65.92	5
t_e (d, e)	65.90	5
$\Delta Hv/T_e$	19.66	5
d 50 to	84.22	4
e 155 °C	0.1168	4
d' 10 to	85.01	5
e' 50 °C	0.1325	5
d_c g/ml		
v_c ml/g		
t_c °C	311.1	5
P_c mm	16953.	5
PV/RT 25°C	1.0001	5
30 mm	1.0000	5
BP	0.9692	5
t_e	0.9588	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0294	4
n 600 °K	0.0015	4
o	-0.0_652	4
m' 700 to	0.1222	4
n' 1000 °K	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. 20°C γ	22.80	2
30	21.87	2
40	20.94	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	96.8	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.77\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 54

NAME	3, 5-Dimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH_2CH(CH_3)CH_2CH(CH_3)-CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	136.0	2
100	73.9	4
30	46.59	4
10	26.	2
1	-8.	5
Pressure mm 25°C	9.495	5
t_e	1124.	5
Density g/ml 20°C	0.723	2
d^t_4 25	0.719	2
30	0.715	4
a	0.739	4
b	$-0.0_{3}80$	4
Ref. Index n_D 20°C	1.4067	2
25	1.4044	2
30	1.4021	4
"C"	0.7493	4
MR (Obs.)	43.6	2
MR (Calc.)	43.762	5
(nD-d/2)	1.045	2
Dielectric		
A (45 to 160 °C)	6.878	2
B	1375.0	2
C	208.0	2
A* (45 to 160 °C)	1.33769	5
B*	1286.3	5
K		
c		
t_k to t_x °C		
A' (25 to 50 °C)	6.97157	5
B'	1423.06	5
C'	212.4	5
A'* (25 to 50 °C)	1.44661	5
B'*	1336.7	5
Ac (160 to t_c °C)	7.2756	5
Bc	1681.6	5
Cc	246.8	5
Cryos. A° consts. B°		
t_e °C	151.27	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.812	5
BP	0.049	2
t_e	0.0363	5
30 mm	0.6824	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.1	2
30 mm	77.40	5
BP	66.4	2
t_e	64.57	5
t_e (d, e)	64.52	5
$ΔHv/T_e$	19.51	5
d (45 to 150 °C)	83.13	4
e	0.1230	4
d' (10 to 45 °C)	83.23	5
e'	0.1250	5
d_c g/ml		
v_c ml/g		
t_c °C	302.3	5
P_c mm	16335.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9626	5
t_e	0.9519	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	$-0.0_{6}52$	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	$-0.0_{6}45$	4
Surface tension dynes/cm. γ 20°C	21.77	2
30	20.85	2
40	19.93	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.l. %/wt.		
u.		
Dispersion	96.9	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.77\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 55

NAME	4,4-Dimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3(CH_2)_2C(CH_3)_2(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	135.2	2
100	73.	2
30	45.16	4
10	24.5	5
1	-9.	5
Pressure mm 25°C	10.32	5
t_e	1128.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.74099	4
b	-0.0_3797	4
Ref. Index n_D 20°C	1.4076	2
25	1.4053	2
30	1.4026	4
"C"	0.7485	4
MR (Obs.)	43.6	2
MR (Calc.)	43.762	5
(nD-d/2)	1.045	2
Dielectric		
A 45 to 160 °C	6.858	2
B	1373.	2
C	210.	2
A* 45 to 160 °C	1.30972	5
B*	1281.5	5
K		
c		
t_k to t_x °C		
A' 25 to 50 °C	6.62226	5
B'	1255.3	5
C'	198.8	5
A'* 25 to 50 °C	1.11783	5
B'*	1178.6	5
Ac 160 to t_c °C	7.2592	5
Bc	1684.1	5
Cc	249.6	5
Cryos. consts. A°		
B°		
t_e °C	150.77	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.680	5
BP	0.0496	4
t_e	0.0365	5
30 mm	0.6865	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.5	2
30 mm	76.26	5
BP	65.9	2
t_e	64.05	5
t_e (d, e)	64.11	5
$\Delta Hv/T_e$	19.37	5
d 45 to 150 °C	81.45	5
e	0.1150	5
d' 10 to 45 °C	83.52	5
e'	0.1609	5
d_c g/ml		
v_c ml/g		
t_c °C	301.7	5
P_c mm	15996.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9673	5
t_e	0.9562	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.01	2
30	21.09	2
40	20.17	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	97.4	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 56

NAME	3-Ethyl-2-methylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH(CH_3)CH(C_2H_5)(CH_2)_2(CH_3)$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	138.0	2
100	75.5	4
30	47.98	4
10	27.	2
1	-6.	5
Pressure mm 25°C	8.744	5
t_e	1140.	5
Density g/ml 20°C	0.731	2
d^t_4 25	0.727	2
30	0.723	4
a	0.74699	4
b	-0.0_3797	4
Ref. Index n_D 20°C	1.4120	2
25	1.4097	2
30	1.4059	4
"C"	0.7479	5
MR (Obs.)	43.6	2
MR (Calc.)	43.762	5
(nD-d/2)	1.046	2
Dielectric		
A (45 to 160 °C)	6.872	2
B	1381.0	2
C	208.0	2
A* (45 to 165 °C)	1.31689	5
B*	1288.5	5
K		
c		
t_k to °C		
t_x		
A' (25 to 50 °C)	6.55701	5
B'	1224.4	5
C'	193.1	5
A'* (25 to 50 °C)	1.05788	5
B'*	1150.8	5
Ac (160 to t_c °C)	7.2707	5
Bc	1691.5	5
Cc	247.5	5
Cryos. consts. A°		
B°		
t_e °C	153.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.929	5
BP	0.050	2
t_e	0.0361	5
30 mm	0.6870	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.7	2
30 mm	77.57	5
BP	67.1	2
t_e	65.40	5
t_e (d, e)	65.24	5
ΔHv/T_e	19.65	5
d (50 to 155 °C)	83.14	4
e	0.1163	4
d' (10 to 50 °C)	86.20	5
e'	0.1799	5
d_c g/ml		
v_c ml/g		
t_c °C	306.7	5
P_c mm	16524.	4
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9703	5
t_e	0.9594	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.80	2
30	21.87	2
40	20.94	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt. u.		
Dispersion	96.6	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 57

NAME	4-Ethyl-2-methylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	
Molecular Formula	C_9H_{20}	$CH_3CH\text{-}CH_2CH\text{-}CH_2CH_3$ with CH_3 and C_2H_5 branches
Molecular Weight	128.250	

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	133.8	2
100	72.0	2
30	44.31	4
10	24.0	2
1	-9.24	4
Pressure mm 25°C	10.719	4
t_e	1127.	5
Density g/ml 20°C	0.723	2
d^t_4 25	0.719	2
30	0.715	4
a	0.73898	4
b	-0.0_3796	4
Ref. Index n_D 20°C	1.4068	2
25	1.4046	2
30	1.4015	4
"C"	0.7486	4
MR (Obs.)	43.7	2
MR (Calc.)	43.762	5
(nD-d/2)	1.045	2
Dielectric		
A 40 to 160 °C	6.854	2
B	1362.	2
C	209.0	2
A* 40 to 160 °C	1.30397	5
B*	1270.45	5
K		
c		
t_k to °C		
t_x		
A' 25 to 45 °C	6.40991	5
B'	1146.31	5
C'	188.1	5
A'* 25 to 45 °C	0.92150	5
B'*	1076.64	5
Ac 160 to t_c °C	7.2532	5
Bc	1669.5	5
Cc	248.2	5
Cryos. consts. A°		
B°		
t_e °C	149.23	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.60471	4
BP	0.0490	2
t_e	0.03630	5
30 mm	0.6820	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.1	2
30 mm	76.35	5
BP	66.4	2
t_e	64.805	5
t_e (d, e)	64.685	5
ΔHv/T_e	19.675	5
d 45 to 150 °C	81.27	4
e	0.1111	4
d' 10 to 45 °C	84.96	5
e'	0.1945	5
d_c g/ml		
v_c ml/g		
t_c °C	299.9	5
P_c mm	16102.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9694	5
t_e	0.9591	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	21.77	2
30	20.85	2
40	19.93	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.l.%/wt. u.		
Dispersion	96.9	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 58

NAME	3-Ethyl-3-methylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	CH_3 / $CH_3CH_2C - (CH_2)_2CH_3$ / C_2H_5

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	140.6	2
100	77.0	2
30	48.68	4
10	27.0	2
1	-6.75	5
Pressure mm 25°C	8.628	5
t_e	1143.	5
Density g/ml 20°C	0.741	2
d^t_4 25	0.737	2
30	0.733	4
a	0.75699	4
b	-0.0_3797	4
Ref. Index n_D 20°C	1.4142	2
25	1.4120	2
30	1.4094	4
"C"	0.7438	4
MR (Obs.)	43.3	2
MR (Calc.)	43.762	5
(nD-d/2)	1.044	2
Dielectric		
A (45 to 165 °C)	6.863	2
B	1404.0	2
C	212.0	2
A* (45 to 170 °C)	1.30737	5
B*	1309.87	5
K		
c		
t_k to t_x °C		
A' (25 to 50 °C)	6.57634	5
B'	1258.52	5
C'	198.1	5
A'* 25 to	1.06948	5
B'* 50 °C	1181.44	5
Ac (165 to t_c °C)	7.2697	5
Bc	1728.4	5
Cc	253.4	5
Cryos. consts. A°		
B°		
t_e °C	157.00	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.991	5
BP	0.050	2
t_e	0.0369	5
30 mm	0.7007	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.2	2
30 mm	76.37	5
BP	66.6	2
t_e	65.02	5
t_e (d, e)	64.86	5
$\Delta Hv/T_e$	19.39	5
d (50 to 155 °C)	81.55	4
e	0.1063	4
d' (10 to 50 °C)	84.24	5
e'	0.1617	5
d_c g/ml		
v_c ml/g		
t_c °C	312.5	5
P_c mm	16423.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9654	4
t_e	0.9550	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300 °K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	23.22	2
30	22.30	2
40	21.38	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.9	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 59

NAME	4-Ethyl-3-methylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} ; Molecular Weight 128.250	$CH_3CH_2CH(C_2H_5)-CH(CH_3)-CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	140.4	2
100	77.0	2
30	50.	2
10	29.	2
1	-5.2	5
Pressure mm 25°C	8.00593	5
t_e	1147.	5
Density g/ml 20°C	0.742	2
d_4^t 25	0.738	2
30	0.734	4
a	0.758	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.412	4
"C"	0.7459	4
MR (Obs.)	43.4	2
MR (Calc.)	43.762	5
(nD-d/2)	1.045	2
Dielectric		
A 45 to 165 °C	6.885	2
B	1399.	2
C	209.0	2
A* 45 to 165 °C	1.32622	5
B*	1305.13	5
K		
c		
t_k to t_x °C		
A' 25 to 50 °C	6.63329	5
B'	1271.80	5
C'	197.0	5
A'* 25 to 50 °C	1.12712	5
B'*	1195.27	5
Ac 165 to t_c °C	7.2865	5
Bc	1716.2	5
Cc	249.3	5
Cryos. consts. A°		
B°		
t_e °C F	156.72	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.101	5
BP	0.05	2
t_e	0.0362	5
30 mm	0.69251	4
ΔHm cal/g		
ΔHv cal/g 25°C	81.9	2
30 mm	77.76	5
BP	67.8	2
t_e	66.15	5
t_e (d, e)	66.01	5
$\Delta Hv/T_e$	19.73	5
d 50 to 155 °C	83.22	4
e	0.1098	4
d' 10 to 50 °C	86.09	5
e'	0.1676	5
d_c g/ml		
v_c ml/g		
t_c °C	312.3	5
P_c mm	17008.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9694	5
t_e	0.9591	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	23.27	2
30	22.34	2
40	21.40	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.5	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 60

NAME	2, 2, 3-Trimethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}
Molecular Weight 128.250		CH_3-C(CH_3)(CH_3)-CH(CH_3)-$(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	133.60	2
100	71.0	2
30	43.	2
10	23.	2
1	-11.	5
Pressure mm 25°C	11.373	5
t_e	1114.	5
Density g/ml 20°C	0.7292	2
d^t_4 25	0.7254	2
30	0.7216	4
a	0.7444	4
b	-0.0_3756	4
Ref. Index n_D 20°C	1.4105	2
25	1.4082	2
30		
"C"	0.7494	4
MR (Obs.)	43.62	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0459	2
Dielectric		
A 40 to 160 °C	6.8448	2
B	1366.0	2
C	211.0	2
A* 40 to 150 °C	1.30918	5
B*	1277.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to 45 °C	6.72059	5
B'	1303.5	5
C'	205.1	5
A'* 25 to	1.20927	5
B'* 45 °C	1223.0	5
Ac 160 to t_c °C	7.2477	4
Bc	1678.6	1
Cc	250.9	1
Cryos. consts. A°		
B°		
t_e °C	148.67	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.551	5
BP	0.0490	2
t_e	0.0369	5
30 mm	0.6863	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.1	2
30 mm	75.47	5
BP	64.8	2
t_e	63.05	5
t_e (d, e)	63.02	5
ΔHv/T_e	19.17	5
d 45 to 150 °C	80.62	4
e	0.1184	4
d' 10 to 45 °C	81.66	5
e'	0.1423	5
d_c g/ml		
v_c ml/g		
t_c °C	300.9	5
P_c mm	16053.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9601	5
t_e	0.9490	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	21.86	2
30	20.96	2
40	20.06	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.3	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.77 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 61

NAME	2, 2, 4-Trimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3C(CH_3)_2CH_2CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C	-120.0	2
F.P. 100%		
B.P. °C 760 mm	126.54	2
100	65.	2
30	38.	2
10	17.	2
1	-16.	5
Pressure mm 25°C	15.539	5
t_e	1083.	5
Density g/ml 20°C	0.7156	2
d^t_4 25	0.7118	2
30	0.7080	4
a	0.7308	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4033	2
25	1.4010	2
30	1.3987	4
"C"	0.7512	4
MR (Obs.)	43.76	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0455	2
Dielectric		
A 35 to	6.8391	2
B 150 °C	1344.0	2
C	213.0	2
A* 35 to	1.31004	5
B* 150 °C	1256.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	6.63114	5
B' 40 °C	1241.8	5
C'	203.3	5
A'* 25 to	1.12734	5
B'* 40 °C	1163.6	5
Ac 150 to	7.2430	5
Bc t_c °C	1651.4	5
Cc	252.1	5
Cryos. A°	0.06	2
consts. B°		
t_e °C	140.65	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	1.17286	4
BP	0.0490	2
t_e	0.0370	5
30 mm	0.6767	4
ΔHm cal/g		
ΔHv cal/g 25°C	75.6	2
30 mm	73.75	5
BP	63.4	2
t_e	61.78	5
t_e (d, e)	61.76	5
ΔHv/T_e	19.14	5
d 40 to	78.13	4
e 140 °C	0.1164	4
d' 10 to	79.26	5
e' 40 °C	0.1463	5
d_c g/ml		
v_c ml/g		
t_c °C	288.7	5
P_c mm	15468.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9601	4
t_e	0.9496	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to	0.0294	4
n 600 °K	0.0015	4
o	-0.0_652	4
m' 700 to	0.1222	4
n' 1000 °K	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. 20°C	20.51	2
γ 30	19.67	2
40	18.83	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.l. %/wt. u.		
Dispersion	98.8	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.77 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 62

NAME	2,2,5-Trimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3C(CH_3)_2 - (CH_2)_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-105.780	2
F.P. 100%		
B.P. °C 760 mm	124.084	2
100	63.092	2
30	36.37	2
10	16.17	2
1	-18.2	5
Pressure mm 25°C	16.593	5
t_e	1066.	5
Density g/ml 20°C	0.70721	2
d^t_4 25	0.70322	2
30	0.69922	4
a	0.72315	4
b	-0.0₃793	4
Ref. Index n_D 20°C	1.39972	2
25	1.39728	2
30	1.39515	4
"C"	0.7538	4
MR (Obs.)	43.935	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04612	2
Dielectric		
A (35 to 145 °C)	6.83531	2
B	1324.049	2
C	210.737	2
A* (35 to 150 °C)	1.33661	5
B*	1244.71	5
K		
c		
t_k to t_x °C		
A' (25 to 40 °C)	7.43548	5
B'	1637.27	5
C'	238.4	5
A'* (25 to 40 °C)	1.88305	5
B'*	1534.28	5
Ac (145 to t_c °C)	7.2339	5
Bc	1621.3	5
Cc	248.5	5
Cryos. consts. A°	0.0265	2
B°		
t_e °C	137.04	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.109	5
BP	0.04838	2
t_e	0.0372	5
30 mm	0.6676	4
ΔHm cal/g		
ΔHv cal/g 25°C	74.86	2
30 mm	74.14	5
BP	62.9	2
t_e	61.44	5
t_e (d, e)	61.24	5
ΔHv/T_e	19.21	5
d (40 to 135 °C)	78.80	4
e	0.1281	4
d' (10 to 40 °C)	76.45	5
e'	0.0634	5
d_c g/ml		
v_c ml/g		
t_c °C	282.1	5
P_c mm	15064.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9458	4
t_e	0.9347	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0₆52	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0₆45	4
Surface tension dynes/cm. γ 20°C	20.04	2
30	19.60	2
40	18.29	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	99.0	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 63

NAME	2,3,3-Trimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH(CH_3)$-$C(CH_3)_2$-$(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C	-116.800	2
F.P. 100%		
B.P. °C 760 mm	137.68	2
100	74.	2
30	46.	2
10	25.	2
1	-9.	5
Pressure mm 25°C	10.01	5
t_e	1130.	5
Density g/ml 20°C	0.738	2
d^t_4 25	0.734	2
30	0.730	4
a	0.754	4
b	-0.0_3797	4
Ref. Index n_D 20°C	1.4141	2
25	1.4119	2
30	1.4092	4
"C"	0.7467	4
MR (Obs.)	43.4	2
MR (Calc.)	43.762	5
(nD-d/2)	1.045	2
Dielectric		
A 45 to 165 °C	6.8474	2
B	1391.0	2
C	213.0	2
A* 45 to 165 °C	1.29980	5
B*	1298.6	5
K		
c		
t_k to t_x °C		
A' 25 to 45 °C	6.55736	5
B'	1244.81	5
C'	199.0	5
A'* 25 to 45 °C	1.05181	5
B'*	1167.7	5
Ac 165 to t_c °C	7.2550	5
Bc	1713.7	5
Cc	254.3	5
Cryos. consts. A°	0.0447	2
B°		
t_e °C	153.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.749	5
BP	0.0505	4
t_e	0.0371	5
30 mm	0.6982	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.7	2
30 mm	75.38	5
BP	65.2	2
t_e	63.43	5
t_e (d, e)	63.43	5
ΔHv/T_e	19.06	5
d 45 to 155 °C	80.49	5
e	0.1110	5
d' 10 to 45 °C	82.65	5
e'	0.1581	5
d_c g/ml		
v_c ml/g		
t_c °C	307.8	5
P_c mm	16059.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9629	5
t_e	0.9517	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.41	2
30	21.49	2
40	20.59	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.3	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.77 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 64

NAME	2, 3, 4-Trimethylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	$CH_3CH\ CH(CH_3)\ CH\ CH_2CH_3$ with CH_3 on C2, C3 and C4

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	139.0	2
100	76.	2
30	48.	2
10	27.	2
1	-7.	5
Pressure mm 25°C	9.000	5
t_e	1144.	5
Density g/ml 20°C	0.7392	2
d^t_4 25	0.7354	2
30	0.7316	4
a	0.7544	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4144	2
25	1.4120	2
30	1.4096	4
"C"	0.7441	4
MR (Obs.)	43.39	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0448	2
Dielectric		
A 45 to	6.867	2
B 165 °C	1395.	2
C	211.0	2
A* 45 to	1.3076	5
B* 165 °C	1300.	5
K		
c		
t_k to		
t_x °C		
A' 25 to	6.6857	5
B' 50 °C	1302.	5
C'	202.3	5
A'* 25 to	1.1738	5
B'* 50 °C	1223.	5
Ac 165 to	7.2717	5
Bc t_c °C	1715.5	5
Cc	251.9	5
Cryos. consts. A°		
B°		
t_e °C	155.27	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.914	5
BP	0.050	2
t_e	0.0365	5
30 mm	0.6952	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.0	2
30 mm	76.57	5
BP	66.5	2
t_e	64.75	5
t_e (d, e)	64.70	5
$\Delta Hv/T_e$	19.38	5
d 50 to	81.85	4
e 155 °C	0.1104	4
d' 10 to	83.76	5
e' 50 °C	0.1505	5
d_c g/ml		
v_c ml/g		
t_c °C	310.8	5
P_c mm	16713.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9689	4
t_e	0.9594	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to	0.0294	4
n 600 °K	0.0015	4
o	-0.0_652	4
m' 700 to	0.1222	4
n' 1000 °K	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.80	2
30	21.87	2
40	20.94	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	96.4	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 65

NAME	2, 3, 5-Trimethylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250

STRUCTURAL FORMULA:

$CH_3CH(CH_3)CH(CH_3)CH_2CH(CH_3)CH_3$

Property		Value	Ref.
F.P. °C		-127.8	2
F.P. 100%			
B.P. °C	760 mm	131.34	2
	100	69.	2
	30	42.	2
	10	21.	2
	1	-12.9	5
Pressure mm	25°C	12.376	5
	t_e	1104.	5
Density g/ml	20°C	0.7219	2
d^t_4	25	0.7179	2
	30	0.7139	4
a		0.73788	4
b		$-0.0_{3}796$	4
Ref. Index n_D	20°C	1.4061	2
	25	1.4037	2
	30	1.4013	4
"C"		0.7494	4
MR (Obs.)		43.64	2
MR (Calc.)		43.762	5
(nD-d/2)		1.0450	2
Dielectric			
A	40 to 155 °C	6.8505	2
B		1359.	2
C		211.0	2
A*	40 to 155 °C	1.32039	5
B*		1271.80	5
K			
c			
t_k t_x	to °C		
A'	25 to 45 °C	6.96029	5
B'		1415.10	5
C'		216.2	5
A'*	25 to 45 °C	1.43569	5
B'*		1327.54	5
Ac	155 to t_c °C	7.2523	5
Bc		1667.6	5
Cc		250.3	5
Cryos. consts.	A°		
	B°		
t_e °C		145.96	5

Property		Value	Ref.
dt/dP °C/mm	25°C	1.442	5
	BP	0.049	2
	t_e	0.0369	5
	30 mm	0.6814	4
ΔHm cal/g			
ΔHv cal/g	25°C	77.19	2
	30 mm	75.27	5
	BP	64.9	2
	t_e	63.35	5
	t_e (d, e)	63.21	5
	ΔHv/T_e	19.38	5
d	40 to 145 °C	80.13	4
e		0.1159	4
d'	10 to 40 °C	80.03	5
e'		0.1137	5
d_c g/ml			
v_c ml/g			
t_c °C		295.6	5
P_c mm		15745.	5
PV/RT	25°C	1.0000	5
	30 mm	1.0000	5
	BP	0.9586	5
	t_e	0.9475	5
	t_c		
ΔHc kcal/m			
ΔHf			
ΔFf			
Viscosity centistokes η	°C		
B^v A^v	to °C		
(B^v) (A^v)	to °C		
c_p liq.	°K		
c_p vap.	300°K	0.39649	2
	400	0.50136	2
c_v vap.			

Property		Value	Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	0.0294	4
n		0.0015	4
o		$-0.0_{6}52$	4
m'	700 to 1000 °K	0.1222	4
n'		0.0013	4
o'		$-0.0_{6}45$	4
Surface tension dynes/cm. γ	20°C	21.27	2
	30	20.37	2
	40	19.49	2
Parachor [P]	20°C		
	30		
	40		
	Sugd.	385.2	5
Exp. L.1.%/wt.	u.		
Dispersion		97.8	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +	Acetone		
	Carbon tet.		
	Benzene		
	Ether		
	n-Heptane		
	Ethanol		
	Water		
	Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 66

NAME	2,4,4-Trimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH(CH_3)CH_2C(CH_3)_2-CH_2CH_3$

		Ref.
F.P. °C	-113.380	2
F.P. 100%		
B.P. °C 760 mm	130.648	2
100	68.069	2
30	40.62	2
10	19.86	2
1	-14.2	5
Pressure mm 25°C	13.4	5
t_e	1096.	5
Density g/ml 20°C	0.72381	2
d_4^t 25	0.72007	2
30	0.71632	4
a	0.73875	5
b	-0.0_3744	5
Ref. Index n_D 20°C	1.40745	2
25	1.40515	2
30	1.40300	4
"C"	0.7499	4
MR (Obs.)	43.660	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04554	2
Dielectric		
A 40 to	6.85163	2
B 155 °C	1368.723	2
C	214.047	2
A* 40 to	1.32827	5
B* 155 °C	1282.18	5
K		
c		
t_k to		
t_x °C		
A' 25 to	6.79316	5
B' 40 °C	1339.10	5
C'	211.3	5
A'* 25 to	1.27805	5
B'* 40 °C	1255.58	5
Ac 155 to	7.2588	5
Bc t_c °C	1684.3	5
Cc	254.2	5
Cryos. A°	0.0535	2
consts. B°		
t_e °C	145.03	5

		Ref.
dt/dP °C/mm 25°C	1.356	5
BP	0.0496	2
t_e	0.0373	5
30 mm	0.6860	4
ΔHm cal/g		
ΔHv cal/g 25°C	76.1	2
30 mm	74.15	5
BP	63.9	2
t_e	62.41	5
t_e (d, e)	62.26	5
ΔHv/T_e	19.14	5
d 40 to	78.78	4
e 145 °C	0.1139	4
d' 10 to	79.22	5
e' 40 °C	0.1247	5
d_c g/ml		
v_c ml/g		
t_c °C	295.6	5
P_c mm	15689.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9533	4
t_e	0.9421	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300 °K	0.39649	2
400	0.50136	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0294	4
n	600 °K	0.0015	4
o		-0.0_652	4
m'	700 to	0.1222	4
n'	1000 °K	0.0013	4
o'		-0.0_645	4
Surface tension dynes/cm. γ	20°C	21.17	2
	30	20.33	2
	40	19.49	2
Parachor [P]	20°C		
	30		
	40		
	Sugd.	385.2	5
Exp. L.1.%/wt. u.			
Dispersion		98.2	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 67

NAME	3, 3, 4-Trimethylhexane
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} — Molecular Weight 128.250

STRUCTURAL FORMULA

$CH_3CH_2C(CH_3)_2 - CH(CH_3) CH_2CH_3$

Property	Value	Ref.
F.P. °C	-101.20	2
F.P. 100%		
B.P. °C 760 mm	140.46	2
100	77.	2
30	48.	2
10	27.	2
1	-7.90	5
Pressure mm 25°C	8.8191	5
t_e	1121.	5
Density g/ml 20°C	0.7454	2
d^t_4 25	0.7414	2
30	0.7374	4
a	0.7614	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4178	2
25	1.4154	2
30	1.4130	4
"C"	0.7458	4
MR (Obs.)	43.34	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0451	2
Dielectric		
A 45 to 165 °C	6.8557	2
B	1401.0	2
C	212.0	2
A* 45 to 165 °C	1.32602	5
B*	1313.63	5
K		
c		
t_k to		
t_x °C		
A' 25 to 50 °C	6.97246	5
B'	1462.49	5
C'	217.7	5
A'* 25 to	1.43846	5
B'* 50 °C	1372.08	5
Ac 165 to t_c °C	7.2624	5
Bc	1725.1	5
Cc	253.4	5
Cryos. consts. A°	0.033	2
B°		
t_e °C	156.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.983	5
BP	0.049	2
t_e	0.0375	5
30 mm	0.7011	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.8	2
30 mm	76.23	5
BP	65.5	2
t_e	63.85	5
t_e (d, e)	63.67	5
$\Delta Hv/T_e$	19.07	5
d 50 to 155 °C	81.89	4
e	0.1167	4
d' 10 to 50 °C	81.54	5
e'	0.1094	5
d_c g/ml		
v_c ml/g		
t_c °C	312.0	5
P_c mm	16275.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9514	4
t_e	0.9391	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	23.27	2
30	22.31	2
40	21.35	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	95.3	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 68

NAME	3,3-Diethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3CH_2C(C_2H_5)_2CH_2CH_3$

		Ref.
F.P. °C	-33.110	2
F.P. 100%		
B.P. °C 760 mm	146.168	2
100	81.044	2
30	52.40	2
10	30.71	2
1	-4.20	5
Pressure mm 25°C	7.168	5
t_e	1157.	5
Density g/ml 20°C	0.75359	2
d^t_4 25	0.75000	2
30	0.74641	4
a	0.76794	4
b	-0.0_3716	4
Ref. Index n_D 20°C	1.42051	2
25	1.41837	2
30	1.41623	4
"C"	0.7419	4
MR (Obs.)	43.113	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04372	2
Dielectric		
A (50 to 175 °C)	6.89262	2
B	1451.245	2
C	215.575	2
A* (50 to 175 °C)	1.33005	5
B*	1353.96	5
K		
c		
t_k / t_x (to °C)		
A' (25 to 55 °C)	6.54752	5
B'	1272.18	5
C'	198.5	5
A'* 25 to	1.03683	5
B'* 55 °C	1194.11	5
Ac (175 to t_c °C)	7.3074	5
Bc	1793.2	5
Cc	259.2	5
Cryos. consts. A°	0.0223	2
B°		
t_e °C	163.42	5

		Ref.
dt/dP °C/mm 25°C	2.379	5
BP	0.05153	2
t_e	0.0371	5
30 mm	0.7164	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.8	2
30 mm	76.44	5
BP	67.1	2
t_e	65.46	5
t_e (d, e)	65.38	5
ΔHv/T_e	19.23	5
d (50 to 165 °C)	81.66	4
e	0.0996	4
d' (10 to 50 °C)	84.78	5
e'	0.1591	5
d_c g/ml		
v_c ml/g		
t_c °C	324.3	5
P_c mm	17130.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9643	5
t_e	0.9526	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	23.75	2
30	22.83	2
40	21.92	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	94.3	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 69

NAME	3-Ethyl-2, 2-dimethylpentane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	CH_3 / CH_3C - CH - CH_2CH_3 / $CH_3C_2H_5$

Property	Value	Ref.
F.P. °C	-99.2	2
F.P. 100%		
B.P. °C 760 mm	133.83	2
100	71.	2
30	43.	2
10	22.	2
1	-10.86	5
Pressure mm 25°C	11.572	5
t_e	1114.	5
Density g/ml 20°C	0.7348	2
d^t_4 25	0.7310	2
30	0.7272	4
a	0.74998	4
b	-0.0_3756	4
Ref. Index n_D 20°C	1.4123	2
25	1.4102	2
30	1.4077	4
"C"	0.7469	4
MR (Obs.)	43.46	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0449	2
Dielectric		
A 40 to 160 °C	6.8482	2
B	1376.0	2
C	213.0	2
A* 40 to 160 °C	1.31046	5
B*	1286.16	5
K		
c		
t_k to t_x °C		
A' 25 to 45 °C	6.34515	5
B'	1130.32	5
C'	189.0	5
A'* 25 to	0.85689	5
B'* 45 °C	1060.39	5
Ac 160 to t_c °C	7.2549	5
Bc	1694.6	5
Cc	253.8	5
Cryos. consts. A°		
B°		
t_e °C	149.00	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.521	5
BP	0.050	2
t_e	0.0371	5
30 mm	0.6905	4
ΔHm cal/g		
ΔHv cal/g 25°C	78.3	2
30 mm	74.88	5
BP	64.9	2
t_e	63.36	5
t_e (d, e)	63.23	5
$\Delta Hv/T_e$	19.25	5
d 45 to 150 °C	79.63	4
e	0.1101	4
d' 10 to 45 °C	83.01	5
e'	0.1883	5
d_c g/ml		
v_c ml/g		
t_c °C	302.2	5
P_c mm	16099.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9599	5
t_e	0.9489	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	22.38	2
30	21.45	2
40	20.52	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.3	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_C$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 70

NAME	3-Ethyl-2, 3-dimethylpentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20} · Molecular Weight 128.250

STRUCTURAL FORMULA: CH_3-CH(-CH_3)-C(-CH_3)(-C_2H_5)-CH_2CH_3

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	142.	2
100	77.	2
30	49.	2
10	28.	2
1	-7.09	5
Pressure mm 25°C	8.591	5
t_e	1138.	5
Density g/ml 20°C	0.754	2
d^t_4 25	0.750	2
30	0.746	4
a	0.76999	4
b	$-0.0_{3}797$	4
Ref. Index n_D 20°C	1.419	2
25	1.417	2
30	1.415	4
"C"	0.7390	4
MR (Obs.)	43.0	2
MR (Calc.)	43.762	5
(nD-d/2)	1.042	2
Dielectric		
A 45 to 170 °C	6.853	2
B	1414.	2
C	214.	2
A* 45 to 170 °C	1.30518	5
B*	1321.20	5
K		
c		
t_k to t_x °C		
A' 25 to 50 °C	6.60638	5
B'	1287.24	5
C'	201.9	5
A'* 25 to 50 °C	1.09388	5
B'*	1207.57	5
Ac 170 to t_c °C	7.2640	5
Bc	1746.3	5
Cc	256.6	5
Cryos. consts. A° B°		
t_e °C	158.42	5

		Ref.
dt/dP °C/mm 25°C	2.0224	5
BP	0.050	2
t_e	0.0374	5
30 mm	0.7083	4
ΔHm cal/g		
ΔHv cal/g 25°C	79.3	2
30 mm	75.71	5
BP	65.8	2
t_e	64.22	5
t_e (d, e)	64.05	5
ΔHv/T_e	19.08	5
d 50 to 160 °C	80.94	4
e	0.1066	4
d' 10 to 50 °C	83.03	5
e'	0.1493	5
d_c g/ml		
v_c ml/g		
t_c °C	316.4	5
P_c mm	16454.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9589	5
t_e	0.9477	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	$-0.0_{6}52$	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	$-0.0_{6}45$	4
Surface tension dynes/cm. γ 20°C	23.87	2
30	22.94	2
40	22.00	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	94.6	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 71

NAME	3-Ethyl-2,4-dimethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	CH_3CH-$CH(C_2H_5)$-CH CH_3 with CH_3 on each CH ($CH_3CH(CH_3)$-$CH(C_2H_5)$-$CH(CH_3)CH_3$)

Property	Value	Ref.
F.P. °C	-122.2	2
F.P. 100%		
B.P. °C 760 mm	136.73	2
100	73.	2
30	45.	2
10	24.	2
1	-8.42	5
Pressure mm 25°C	10.228	5
t_e	1145.	5
Density g/ml 20°C	0.7379	2
d^t_4 25	0.7341	2
30	0.73031	4
a	0.75308	4
b	-0.0$_3$757	4
Ref. Index n_D 20°C	1.4137	2
25	1.4115	2
30	1.4091	4
"C"	0.7461	4
MR (Obs.)	43.40	2
MR (Calc.)	43.762	5
(nD-d/2)	1.0488	2
Dielectric		
A 45 to	6.8524	2
B 165 °C	1389.0	2
C	213.0	2
A* 45 to	1.2849	5
B* 165 °C	1291.5	5
K		
c		
t_k to		
t_x °C		
A' 25 to	6.10396	5
B' 45 °C	1029.13	5
C'	177.0	5
A'* 25 to	0.62992	5
B'* 45 °C	965.97	5
Ac 165 to	7.2601	5
Bc t_c °C	1711.9	5
Cc	254.4	5
Cryos. A°		
consts. B°		
t_e °C	153.13	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	1.684	5
BP	0.0503	4
t_e	0.0366	5
30 mm	0.6959	4
ΔHm cal/g		
ΔHv cal/g 25°C	80.0	2
30 mm	75.34	5
BP	66.0	2
t_e	64.43	5
t_e (d, e)	64.32	5
ΔHv/T_e	19.40	5
d 50 to	79.98	4
e 150 °C	0.1022	4
d' 10 to	85.71	5
e' 50 °C	0.2286	5
d_c g/ml		
v_c ml/g		
t_c °C	307.6	5
P_c mm	16350.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9753	5
t_e	0.9650	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0294	4
n 600 °K	0.0015	4
o	-0.0$_6$52	4
m' 700 to	0.1222	4
n' 1000 °K	0.0013	4
o'	-0.0$_6$45	4
Surface tension dynes/cm. 20°C	22.80	2
γ 30	21.87	2
40	20.94	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	96.4	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+]		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 72

NAME	2, 2, 3, 3-Tetramethylpentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	CH_3CH_3 / $CH_3C - C - CH_2CH_3$ / CH_3CH_3

Property	Value	Ref.
F.P. °C	-9.90	2
F.P. 100%		
B.P. °C 760 mm	140.274	2
100	75.705	2
30	47.43	2
10	26.05	2
1	-10.3	5
Pressure mm 25°C	9.525	5
t_e	1150.3	5
Density g/ml 20°C	0.75666	2
d^t_4 25	0.75299	2
30	0.74932	4
a	0.77133	4
b	-0.0_3731	4
Ref. Index n_D 20°C	1.42360	2
25	1.42140	2
30	1.41921	4
"C"	0.7440	4
MR (Obs.)	43.215	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04527	2
Dielectric		
A 45 to	6.82876	2
B 180 °C	1397.483	2
C	213.703	2
A* 45 to	1.26281	5
B* 170 °C	1300.1	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.40914	5
B' 50 °C	1717.03	5
C'	242.0	5
A'* 25 to	1.84194	5
B'* 50 °C	1608.68	5
Ac 180 to	7.29516	5
Bc t_c °C	1788.9	5
Cc	265.7	5
Cryos. consts. A°	0.00403	2
B°		
t_e °C	157.18	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.893	5
BP	0.05124	2
t_e	0.0372	5
30 mm	0.7064	4
ΔHm cal/g		
ΔHv cal/g 25°C	76.4	2
30 mm	75.17	5
BP	65.7	2
t_e	63.93	5
t_e (d, e)	63.98	5
ΔHv/T_e	19.05	5
d 50 to	80.00	4
e 160 °C	0.1020	4
d' 10 to	77.77	5
e' 50 °C	0.0550	5
d_c g/ml		
v_c ml/g		
t_c °C	316.6	5
P_c mm	16709.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9714	4
t_e	0.9606	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	23.38	2
30	22.48	2
40	21.60	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.9	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.77 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 73

NAME	2, 2, 3, 4-Tetramethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3C(CH_3)(CH_3)$ - CH(CH_3)-CH(CH_3) CH_3

Property	Value	Ref.
F.P. °C	-121.09	2
F.P. 100%		
B.P. °C 760 mm	133.016	2
100	69.617	2
30	41.85	2
10	20.85	2
1	-13.0	5
Pressure mm 25°C	12.574	4
t_e	1114.4	5
Density g/ml 20°C	0.73895	2
d^t_4 25	0.73524	2
30	0.73153	4
a	0.75378	4
b	-0.0$_3$738	4
Ref. Index n_D 20°C	1.41472	2
25	1.41246	2
30	1.41026	4
"C"	0.7467	4
MR (Obs.)	43.436	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04524	2
Dielectric		
A (40 to 160 °C)	6.83173	2
B	1374.042	2
C	214.762	2
A* (40 to 160 °C)	1.29082	5
B*	1282.8	5
K		
c		
t_k to t_x °C		
A' (25 to 45 °C)	6.56205	5
B'	1239.12	5
C'	201.8	5
A'* (25 to 45 °C)	1.05786	5
B'*	1161.40	5
Ac (160 to t_c °C)	7.28064	5
Bc	1735.3	5
Cc	261.7	5
Cryos. consts. A°	0.0027	2
B°		
t_e °C	148.29	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.434	4
BP	0.05030	2
t_e	0.0374	5
30 mm	0.6938	4
ΔHm cal/g		
ΔHv cal/g 25°C	76.4	2
30 mm	73.89	5
BP	63.9	2
t_e	62.23	5
t_e (d, e)	62.23	5
ΔHv/T_e	18.93	5
d (45 to 150 °C)	78.48	4
e	0.1096	4
d' (10 to 45 °C)	80.12	5
e'	0.1488	5
d_c g/ml		
v_c ml/g		
t_c °C	302.3	5
P_c mm	15991.	5
PV/RT 25°C	1.0000	4
30 mm	1.0000	5
BP	0.9613	4
t_e	0.9503	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0$_6$52	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0$_6$45	4
Surface tension dynes/cm. γ 20°C	21.98	2
30	21.11	2
40	20.25	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt. u.		
Dispersion	96.8	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.76 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 74

NAME	2, 2, 4, 4-Tetramethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_9H_{20} / Molecular Weight 128.250	$CH_3C(CH_3)_2 - CH_2C(CH_3)_2 - CH_3$

Property	Value	Ref.
F.P. °C	-66.54	2
F.P. 100%		
B.P. °C 760 mm	122.284	2
100	60.154	2
30	33.00	2
10	12.50	2
1	-24.7	5
Pressure mm 25°C	20.0524	5
t_e	1073.	5
Density g/ml 20°C	0.71947	2
d_4^t 25	0.71563	2
30	0.71178	4
a	0.73482	4
b	-0.0_3762	4
Ref. Index n_D 20°C	1.40694	2
25	1.40459	2
30		
"C"	0.7535	4
MR (Obs.)	43.875	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04720	2
Dielectric		
A (30 to 155 °C)	6.79710	2
B	1325.183	2
C	216.093	2
A* (30 to 145 °C)	1.28102	5
B*	1239.69	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	8.87467	5
B'	2562.31	5
C'	313.4	5
A'* 25 to	3.21915	5
B'* 35 °C	2395.13	5
Ac (155 to t_c °C)	7.2058	5
Bc	1635.6	5
Cc	256.0	5
Cryos. consts. A°	0.0273	2
B°		
t_e °C	135.74	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.968	4
BP	0.04932	2
t_e	0.0378	5
30 mm	0.6778	4
ΔHm cal/g		
ΔHv cal/g 25°C	71.0	2
30 mm	71.44	5
BP	61.2	2
t_e	59.69	5
t_e (d, e)	59.66	5
ΔHv/T_e	18.72	5
d (35 to 135 °C)	75.23	4
e	0.1147	4
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	283.0	5
P_c mm	14836.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9538	4
t_e	0.9431	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0294	4
n	0.0015	4
o	-0.0_652	4
m' (700 to 1000 °K)	0.1222	4
n'	0.0013	4
o'	-0.0_645	4
Surface tension dynes/cm. γ 20°C	20.37	2
30	19.46	2
40	18.55	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L. l. %/wt. u.		
Dispersion	101.0	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 75

NAME	2, 3, 3, 4-Tetramethylpentane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{20}	Molecular Weight 128.250	$CH_3CH\,C(CH_3)(CH_3)\,CH(CH_3)\,CH_3$ with CH_3 on each of C2, C3, C3, C4

Property	Value	Ref.
F.P. °C	-102.123	2
F.P. 100%		
B.P. °C 760 mm	141.551	2
100	76.980	2
30	48.64	2
10	27.20	2
1	-8.44	5
Pressure mm 25°C	8.867	5
t_e	1131.	5
Density g/ml 20°C	0.75473	2
d^t_4 25	0.75113	2
30	0.74753	4
a	0.76912	4
b	-0.0₃717	4
Ref. Index n_D 20°C	1.42222	2
25	1.42003	2
30	1.41798	4
"C"	0.7437	4
MR (Obs.)	43.201	2
MR (Calc.)	43.762	5
(nD-d/2)	1.04486	2
Dielectric		
A 45 to 175 °C	6.85961	2
B	1417.473	2
C	214.705	2
A* 45 to 170 °C	1.31873	5
B*	1326.25	5
K		
c		
t_k to t_x °C		
A' 25 to 50 °C	7.02779	5
B'	1507.44	5
C'	222.9	5
A'* 25 to 50 °C	1.48626	5
B'*	1413.19	5
Ac 175 to t_c °C	7.2719	5
Bc	1751.7	5
Cc	257.6	5
Cryos. consts. A°	0.0369	2
B°		
t_e °C	157.71	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.997	5
BP	0.04223	2
t_e	0.0376	5
30 mm	0.7083	4
ΔHm cal/g		
ΔHv cal/g 25°C	77.8	2
30 mm	75.53	5
BP	65.1	2
t_e	63.31	5
t_e (d, e)	63.29	5
ΔHv/T_e	18.84	5
d 50 to 160 °C	81.00	4
e	0.1123	4
d' 10 to 50 °C	80.20	5
e'	0.0959	5
d_c g/ml		
v_c ml/g		
t_c °C	317.1	5
P_c mm	16742.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9554	4
t_e	0.9434	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.39649	2
400	0.50136	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0294	4
n	0.0015	4
o	-0.0₆52	4
m' 700 to 1000 °K	0.1222	4
n'	0.0013	4
o'	-0.0₆45	4
Surface tension dynes/cm. γ 20°C	23.31	2
30	22.44	2
40	21.58	2
Parachor [P] 20°C		
30		
40		
Sugd.	385.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.5	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.76 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 76

NAME	n-Decane	STRUCTURAL FORMULA
		$CH_3(CH_2)_8CH_3$

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

		Ref.
F.P. °C	-29.661	2
F.P. 100%		
B.P. °C		
760 mm	174.123	2
100	108.582	2
30	79.65	4
10	57.56	5
1	20.59	5
Pressure mm 25°C	1.366	5
t_e	1190.8	5
Density g/ml 20°C	0.73005	2
d_4^t 25	0.72625	2
30	0.72245	2
a	0.74525	4
b	-0.0_3759	4
Ref. Index n_D 20°C	1.41189	2
25	1.40967	2
30	1.40734	4
"C"	0.7510	4
MR (Obs.)	48.481	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04686	2
Dielectric		
A 75 to	6.95367	2
B 210 °C	1501.268	2
C	194.480	2
A* 75 to	1.47706	4
B* 200 °C	1422.53	4
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33883	5
B' 80 °C	1719.86	5
C'	213.8	5
A'* 25 to	1.83020	4
B'* 80 °C	1626.19	4
Ac 210 to	7.3363	5
Bc t_c °C	1809.1	5
Cc	232.0	5
Cryos. A° consts.	0.05824	3
B°		
t_e °C	192.66	5

		Ref.
dt/dP °C/mm		
25°C	10.537	5
BP	0.05172	2
t_e	0.0364	5
30 mm	0.7246	4
ΔHm cal/g	48.24	3
ΔHv cal/g		
25°C	86.28	2
30 mm	79.99	5
BP	66.0	2
t_e	63.55	5
t_e (d, e)	64.74	5
ΔHv/T_e	19.41	5
d 80 to	91.79	4
e 190 °C	0.1481	4
d' 10 to	89.16	5
e' 80 °C	0.1151	5
d_c g/ml	0.236	2
v_c ml/g	4.231	2
t_c °C	346.	2
P_c mm	15808.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9345	5
t_e	0.9187	5
t_c	0.246	2
ΔHc kcal/m	1516.63	2
ΔHf		
ΔFf		
Viscosity centistokes η 110 °C	0.5164	2
130	0.4502	2
150	0.3976	2
170	0.3543	2
B^v 70 to	462.90	4
A^v 125 °C	$\bar{2}.50523$	4
(B^v) 125 to	464.77	4
(A^v) 180 °C	$\bar{2}.50071$	4
c_p liq. °K		
c_p vap. 300°K	0.39599	2
400	0.50072	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0256	4
n	600 °K	0.0014	4
o		-0.0_647	4
m'	700 to	0.1099	4
n'	1000 °K	0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm. γ	20°C	23.92	2
	30	22.96	2
	40	22.02	2
Parachor [P]	20°C		
	30		
	40		
	Sugd.	424.2	5
Exp. L. l. %/wt. u.			
Dispersion		98.0	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes η	80°C	0.6544	2
	120	0.4814	2

T_R = 0.78 T_c

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 76, 333 (1954) Finke et al

No. 77

NAME	2-Methylnonane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: $CH_3CH(CH_2)_6CH_3$ with CH_3 on the second carbon

Property	Value	Ref.
F.P. °C	-74.50	2
F.P. 100%		
B.P. °C 760 mm	166.8	2
100	101.27	4
30	72.38	4
10	50.35	5
1	13.55	5
Pressure mm 25°C	2.206	5
t_e	122.39	5
Density g/ml 20°C	0.7281	2
d_4^t 25	0.7242	2
30	0.7203	4
a	0.7437	4
b	-0.0378	4
Ref. Index n_D 20°C	1.4099	2
25	1.4076	2
30	1.4053	4
"C"	0.7496	4
MR (Obs.)	48.40	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0459	2
Dielectric	1.988	5
A (70 to 225 °C)	6.93010	5
B	1485.28	5
C	200.	5
A* (70 to 190 °C)	1.3949	5
B*	1388.6	5
K		
c		
t_k to t_x °C		
A' (10 to 70 °C)	7.2905	5
B'	1688.1	5
C'	218.	5
A'* 10 to	1.7817	5
B'* 70 °C	1592.7	5
Ac (225 to t_c °C)	7.7412	5
Bc	2254.1	5
Cc	298.5	5
Cryos. consts. A°		
B°		
t_e °C	186.55	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.8858	5
BP	0.05176	5
t_e	0.0357	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.75	5
30 mm	76.89	5
BP	66.18	5
t_e	63.96	5
t_e (d, e)	63.94	5
$\Delta Hv/T_e$	19.79	5
d (10 to 190 °C)	85.10	5
e	0.1134	5
d' (20 to 70 °C)	84.32	5
e'	0.1026	5
d_c g/ml	0.245	5
v_c ml/g	4.076	5
t_c °C	336.	5
P_c mm	15364.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9693	5
t_e	0.9568	5
t_c	0.242	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.21	5
30	21.27	5
40	20.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	99.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 78

NAME	3-Methylnonane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2CH(CH_3)(CH_2)_5CH_3$

		Ref.
F.P. °C	-84.80	2
F.P. 100%		
B.P. °C 760 mm	167.8	2
100	103.08	4
30	74.40	4
10	52.48	5
1	15.75	5
Pressure mm 25°C	1.907	5
t_e	1200.1	5
Density g/ml 20°C	0.7334	2
d^t_4 25	0.7296	2
30	0.7258	4
a	0.7486	4
b	-0.0₃76	4
Ref. Index n_D 20°C	1.4125	2
25	1.4103	2
30	1.4080	4
"C"	0.7486	4
MR (Obs.)	48.32	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0458	2
Dielectric	1.995	5
A 75 to 226 °C	7.0020	5
B	1516.	5
C	200.	5
A* 75 to 200 °C	1.4957	5
B*	1427.3	5
K		
c		
t_k to t_x °C		
A' 15 to 75 °C	7.3644	5
B'	1721.	5
C'	218.	5
A'* 15 to	1.8541	5
B'* 75 °C	1625.7	5
Ac 226 to t_c °C	7.8175	5
Bc	2291.	5
Cc	298.	5
Cryos. consts. A° B°		
t_e °C	186.5	5

		Ref.
dt/dP °C/mm 25°C	7.8111	5
BP	0.05101	5
t_e	0.03565	5
30 mm	0.7190	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.37	5
30 mm	78.24	5
BP	66.38	5
t_e	64.04	5
t_e (d, e)	64.01	5
$\Delta Hv/T_e$	19.82	5
d 75 to 185 °C	87.68	5
e	0.1269	5
d' 15 to 75 °C	85.96	5
e'	0.1039	5
d_c g/ml	0.243	5
v_c ml/g	4.117	5
t_c °C	336.8	5
P_c mm	16121.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9536	5
t_e	0.9384	5
t_c	0.234	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C, A^v		
(B^v) to °C, (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.86	5
30	21.93	5
40	21.02	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 79

NAME	4-Methylnonane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: $CH_3(CH_2)_2CH(CH_3)(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C	-98.7	2
F.P. 100%		
B.P. °C 760 mm	165.7	2
100	101.18	4
30	72.61	4
10	50.79	5
1	14.25	5
Pressure mm 25°C	2.1059	5
t_e	1195.8	5
Density g/ml 20°C	0.7323	2
d^t_4 25	0.7284	2
30	0.7245	4
a	0.7479	4
b	$-0.0_{3}78$	4
Ref. Index n_D 20°C	1.4123	2
25	1.4100	2
30	1.4076	4
"C"	0.7494	4
MR (Obs.)	48.38	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0461	2
Dielectric	1.994	5
A 70 to	6.9904	5
B 222 °C	1503.	5
C	200.	5
A* 70 to	1.4844	5
B* 190 °C	1414.3	5
K		
c		
t_k to		
t_x °C		
A' 15 to	7.3544	5
B' 70 °C	1708.0	5
C'	218.	5
A'* 15 to	1.8560	5
B'* 70 °C	1615.6	5
Ac 222 to	7.7856	5
Bc t_c °C	2249.3	5
Cc	294.3	5
Cryos. consts. A°		
B°		
t_e °C	184.13	5

Property	Value	Ref.
dt/dP °C/mm 25°C	7.1296	5
BP	0.05085	5
t_e	0.03566	5
30 mm	0.7158	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.72	5
30 mm	77.78	5
BP	65.98	5
t_e	63.70	5
t_e (d, e)	63.64	5
$\Delta Hv/T_e$	19.82	5
d 70 to	86.99	5
e 180 °C	0.1268	5
d' 15 to	85.31	5
e' 70 °C	0.1037	5
d_c g/ml	0.242	5
v_c ml/g	4.127	5
t_c °C	333.	5
P_c mm	15903.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9542	5
t_e	0.9399	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.72	5
30	21.77	5
40	20.84	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 80

NAME	5-Methylnonane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3(CH_2)_3CH(CH_3)(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C	-87.70	2
F.P. 100%		
B.P. °C 760 mm	165.1	2
100	100.6	4
30	72.05	4
10	50.26	5
1	13.77	5
Pressure mm 25°C	2.1860	5
t_e	1197.0	5
Density g/ml 20°C	0.7326	2
d^t_4 25	0.7288	2
30	0.7250	4
a	0.7478	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4122	2
25	1.4100	2
30	1.4077	4
"C"	0.7489	4
MR (Obs.)	48.34	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0459	2
Dielectric	1.994	5
A (55 to 222 °C)	6.9871	5
B	1499.	5
C	200.	5
A* (55 to 190 °C)	1.4783	5
B*	1409.5	5
K		
c		
t_k to t_x °C		
A' (10 to 55 °C)	7.3517	5
B'	1703.9	5
C'	218.	5
A'* (10 to 55 °C)	1.8431	5
B'*	1608.6	5
Ac (222 to t_c °C)	7.7813	5
Bc	2244.	5
Cc	294.	5
Cryos. consts. A°		
B°		
t_e °C	183.47	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.8851	5
BP	0.0508	5
t_e	0.03560	5
30 mm	0.7148	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.52	5
30 mm	77.64	5
BP	65.87	5
t_e	63.73	5
t_e (d, e)	63.55	5
ΔHv/T_e	19.61	5
d (70 to 180 °C)	86.76	5
e	0.1265	5
d' (25 to 70 °C)	85.11	5
e'	0.1037	5
d_c g/ml	0.244	5
v_c ml/g	4.098	5
t_c °C	333.	5
P_c mm	16015.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9542	5
t_e	0.9421	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	22.76	5
30	21.83	5
40	20.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 81

NAME	3-Ethyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH_2CH(C_2H_5)(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	168.	2
100	103.2	4
30	74.52	4
10	52.60	5
1	15.86	5
Pressure mm 25°C	1.8929	5
t_e	1202.5	5
Density g/ml 20°C	0.740	2
d^t_4 25	0.736	2
30	0.732	4
a	0.756	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7479	4
MR (Obs.)	48.3	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.005	5
A 75 to 227 °C	7.0031	5
B	1517.	5
C	200.	5
A* 75 to 200 °C	1.4945	5
B*	1427.6	5
K		
c		
t_k / t_x to °C		
A' 10 to 75 °C	7.3654	5
B'	1722.5	5
C'	218.	5
A'* 10 to 75 °C	1.8550	5
B'*	1626.7	5
Ac 227 to t_c °C	7.8210	5
Bc	2294.9	5
Cc	298.1	5
Cryos. consts. A°		
B°		
t_e °C	186.69	5

Property	Value	Ref.
dt/dP °C/mm 25°C	7.8654	5
BP	0.05101	5
t_e	0.0356	5
30 mm	0.7192	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.42	5
30 mm	78.27	5
BP	66.42	5
t_e	64.16	5
t_e (d, e)	64.05	5
ΔHv/T_e	19.85	5
d 75 to 185 °C	87.72	5
e	0.1268	5
d' 10 to 75 °C	86.02	5
e'	0.1039	5
d_c g/ml	0.245	5
v_c ml/g	4.085	5
t_c °C	337.	5
P_c mm	16170.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9535	5
t_e	0.9398	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.70	5
30	22.69	5
40	21.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 82

NAME	4-Ethyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3(CH_2)_2CH(C_2H_5)(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	168.	2
100	103.2	4
30	74.52	4
10	52.60	5
1	15.86	5
Pressure mm 25°C	1.8929	5
t_e	1202.5	5
Density g/ml 20°C	0.740	2
d^t_4 25	0.736	2
30	0.732	4
a	0.756	4
b	-0.0380	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7479	4
MR (Obs.)	48.3	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.005	5
A (75 to 227 °C)	7.0031	5
B	1517.	5
C	200.	5
A* (75 to 200 °C)	1.4945	5
B*	1427.6	5
K		
c		
t_k to t_x °C		
A' (10 to 75 °C)	7.3654	5
B'	1722.5	5
C'	218.	5
A'* (10 to 75 °C)	1.8550	5
B'*	1626.7	5
Ac (227 to t_c °C)	7.8210	5
Bc	2294.9	5
Cc	298.1	5
Cryos. consts. A°		
B°		
t_e °C	186.69	5

Property	Value	Ref.
dt/dP °C/mm 25°C	7.8654	5
BP	0.05101	5
t_e	0.03560	5
30 mm	0.7192	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.42	5
30 mm	78.27	5
BP	66.42	5
t_e	64.16	5
t_e (d, e)	64.05	5
ΔHv/T_e	19.85	5
d (75 to 185 °C)	87.72	5
e	0.1268	5
d' (10 to 75 °C)	86.02	5
e'	0.1039	5
d_c g/ml	0.245	5
v_c ml/g	4.085	5
t_c °C	337.	5
P_c mm	16170.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9535	5
t_e	0.9398	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.70	5
30	22.69	5
40	21.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 83

NAME	2, 2-Dimethyloctane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3C(CH_3)_2-(CH_2)_5CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	155.	2
100	90.3	4
30	61.71	4
10	39.9	5
1	3.4	5
Pressure mm 25°C	4.237	5
t_e	1161.	5
Density g/ml 20°C	0.7245	2
d_4^t 25	0.7208	2
30	0.7171	4
a	0.7393	4
b	-0.0_374	4
Ref. Index n_D 20°C	1.4082	2
25	1.4060	2
30	1.4038	4
"C"	0.7504	4
MR (Obs.)	48.47	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0460	2
Dielectric	1.983	5
A 60 to 205 °C	6.9621	5
B	1488.	5
C	210.	5
A* 60 to 180 °C	1.46537	5
B*	1398.3	5
K		
c		
t_k to t_x °C		
A' 0 to 60 °C	7.32603	5
B'	1691.8	5
C'	228.	5
A'* 0 to 60 °C	1.81246	5
B'*	1591.5	5
Ac 205 to t_c °C	7.7110	5
Bc	2175.	5
Cc	296.	5
Cryos. consts. A°		
B°		
t_e °C	172.21	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.864	5
BP	0.05104	5
t_e	0.0366	5
30 mm	0.7159	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.85	5
30 mm	72.94	5
BP	62.29	4
t_e	60.38	5
t_e (d, e)	60.32	5
$\Delta Hv/T_e$	19.29	5
d 60 to 170 °C	79.98	5
e	0.1142	5
d' 10 to 60 °C	77.84	5
e'	0.0794	5
d_c g/ml	0.240	5
v_c ml/g	4.170	5
t_c °C	318.5	5
P_c mm	14927.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9369	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.77	5
30	20.89	5
40	20.04	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	100.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 84

NAME	2,3-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH(CH_3)CH(CH_3)(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	163.8	2
100	98.0	4
30	68.9	4
10	46.7	5
1	9.6	5
Pressure mm 25°C	2.828	5
t_e	1183.	5
Density g/ml 20°C	0.7376	2
d^t_4 25	0.7337	2
30	0.7298	4
a	0.7532	4
b	-0.0₃78	4
Ref. Index n_D 20°C	1.4148	2
25	1.4125	2
30	1.4102	4
"C"	0.7483	4
MR (Obs.)	48.28	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0460	2
Dielectric	2.002	5
A 70 to 220°C	6.9766	5
B	1522.	5
C	208.	5
A* 70 to 190°C	1.47511	5
B*	1432.2	5
K		
c		
t_k to t_x °C		
A' 25 to 70°C	7.33426	5
B'	1726.8	5
C'	226.	5
A'* 25 to	1.81744	5
B'* 70°C	1626.3	5
Ac 220 to t_c °C	7.7920	5
Bc	2301.	5
Cc	306.	5
Cryos. consts. A°		
B°		
t_e °C	182.10	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.5982	5
BP	0.0519	5
t_e	0.0367	5
30 mm	0.7287	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.46	5
30 mm	74.79	5
BP	63.73	5
t_e	61.68	5
t_e (d,e)	61.60	5
ΔHv/T_e	19.27	5
d 70 to 180 °C	82.83	5
e	0.1166	5
d' 25 to 70 °C	80.54	5
e'	0.0834	5
d_c g/ml	0.241	5
v_c ml/g	4.154	5
t_c °C	331.8	5
P_c mm	15320.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9340	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.39	5
30	22.41	5
40	21.47	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 85

NAME	2, 4-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH\text{-}CH_2CH(CH_2)_3CH_3$ with CH_3 on the 2nd and 4th carbons

Property		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	153.	2
100	88.51	4
30	60.03	4
10	38.3	5
1	1.9	5
Pressure mm 25°C	4.6514	5
t_e	1155.	5
Density g/ml 20°C	0.7264	2
d^t_4 25	0.7224	2
30	0.7184	4
a	0.7424	4
b	-0.0₃80	4
Ref. Index n_D 20°C	1.4093	2
25	1.4069	2
30	1.4045	4
"C"	0.7503	4
MR (Obs.)	48.45	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0461	2
Dielectric	1.986	5
A 60 to 200 °C	6.9568	5
B	1479.	5
C	210.	5
A* 60 to 180 °C	1.46205	5
B*	1390.2	5
K		
c		
t_k to t_x °C		
A' 25 to 60 °C	7.32217	5
B'	1683.2	5
C'	228.	5
A'* 25 to 60 °C	1.80936	5
B'*	1582.9	5
Ac 200 to t_c °C	7.6878	5
Bc	2142.	5
Cc	294.	5
Cryos. consts. A°		
B°		
t_e °C	169.95	5

Property		Ref.
dt/dP °C/mm 25°C	3.5488	5
BP	0.05088	5
t_e	0.0367	5
30 mm	0.7132	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.24	5
30 mm	72.49	5
BP	61.90	5
t_e	60.02	5
t_e (d, e)	59.97	5
ΔHv/T_e	19.27	5
d 60 to 170 °C	79.33	5
e	0.1139	5
d' 25 to 60 °C	77.20	5
e'	0.0785	5
d_c g/ml	0.237	5
v_c ml/g	4.214	5
t_c °C	314.7	5
P_c mm	14677.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9370	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B_v^v to °C		
A_v^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. γ 20°C	22.00	5
30	21.04	5
40	20.12	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 86

NAME	2,5-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_2)_2CH(CH_2)_2CH_3$ with CH_3 and CH_3 branches

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	158.	2
100	92.9	4
30	64.15	4
10	42.2	5
1	5.5	5
Pressure mm 25°C	3.7001	5
t_e	1170.	5
Density g/ml 20°C	0.736	2
d_4^t 25	0.732	2
30	0.728	4
a	0.752	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7486	4
MR (Obs.)	48.3	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.000	5
A 65 to 210 °C	6.9658	5
B	1499.	5
C	209.	5
A* 65 to 185 °C	1.46620	5
B*	1409.0	5
K		
c		
t_k to t_x °C		
A' 25 to 65 °C	7.32751	5
B'	1703.2	5
C'	227.	5
A'* 25 to	1.81284	5
B'* 65 °C	1602.8	5
Ac 210 to t_c °C	7.7373	5
Bc	2217.	5
Cc	299.7	5
Cryos. consts. A°		
B°		
t_e °C	175.63	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.3755	5
BP	0.05134	5
t_e	0.0365	5
30 mm	0.7204	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.71	5
30 mm	73.55	5
BP	62.81	5
t_e	60.85	5
t_e (d, e)	60.79	5
$\Delta Hv/T_e$	19.29	5
d 65 to 175 °C	80.89	5
e	0.1145	5
d' 25 to 65 °C	78.73	5
e'	0.0808	5
d_c g/ml	0.240	5
v_c ml/g	4.160	5
t_c °C	323.2	5
P_c mm	15080.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9366	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.19	5
30	22.19	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.I.%/wt. u.		
Dispersion	99.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 87

NAME	2, 6-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH(CH_3)(CH_2)_3CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	158.54	2
100	93.4	4
30	64.62	4
10	42.6	5
1	5.9	5
Pressure mm 25°C	3.6029	5
t_e	1171.	5
Density g/ml 20°C	0.7285	2
d^t_4 25	0.7245	2
30	0.7205	4
a	0.7449	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4113	2
25	1.4089	2
30	1.4065	4
"C"	0.7516	4
MR (Obs.)	48.52	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0471	2
Dielectric	1.992	5
A 70 to	6.9681	5
B 210 °C	1502.	5
C	209.	5
A* 70 to	1.46804	5
B* 185 °C	1411.6	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.32953	5
B' 70 °C	1705.9	5
C'	227.	5
A'* 25 to	1.81464	5
B'* 70 °C	1605.5	5
Ac 210 to	7.7359	5
Bc t_c °C	2214.	5
Cc	299.	5
Cryos. consts. A°		
B°		
t_e °C	176.23	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.4828	5
BP	0.05137	5
t_e	0.0366	5
30 mm	0.7210	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.90	5
30 mm	73.69	5
BP	62.92	5
t_e	60.95	5
t_e (d, e)	60.89	5
$\Delta Hv/T_e$	19.30	5
d 70 to	81.09	5
e 175 °C	0.1146	5
d' 25 to	78.92	5
e' 70 °C	0.0810	5
d_c g/ml	0.237	5
v_c ml/g	4.217	5
t_c °C	322.7	5
P_c mm	14866.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9366	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.26	5
30	21.29	5
40	20.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	99.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 88

NAME	2,7-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)-(CH_2)_4CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-54.	2
F.P. 100%		
B.P. °C 760 mm	159.87	2
100	94.6	4
30	65.7	4
10	43.7	5
1	6.8	5
Pressure mm 25°C	3.3920	5
t_e	1173.	5
Density g/ml 20°C	0.7242	2
d^t_4 25	0.7202	2
30	0.7162	4
a	0.7402	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4086	2
25	1.4062	2
30	1.4038	4
"C"	0.7514	4
MR (Obs.)	48.53	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0465	2
Dielectric	1.984	5
A (70 to 210 °C)	6.9697	5
B	1507.	5
C	209.	5
A* (70 to 185 °C)	1.47015	5
B*	1416.8	5
K		
c		
t_k (to °C)		
t_x		
A' (25 to 70 °C)	7.33015	5
B'	1711.0	5
C'	227.	5
A'* 25 to	1.81478	5
B'* 70 °C	1610.6	5
Ac (210 to t_c °C)	7.7416	5
Bc	2225.	5
Cc	299.	5
Cryos. consts. A°		
B°		
t_e °C	177.69	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.7380	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7230	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.28	5
30 mm	73.96	5
BP	63.08	5
t_e	61.09	5
t_e (d, e)	61.02	5
$\Delta Hv/T_e$	19.27	5
d (70 to 175 °C)	81.55	5
e	0.1155	5
d' (25 to 70 °C)	79.32	5
e'	0.0816	5
d_c g/ml	0.235	5
v_c ml/g	4.261	5
t_c °C	323.6	5
P_c mm	14735.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9354	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.73	5
30	20.79	5
40	19.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.6	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 89

NAME	3, 3-Dimethyloctane
Mole % Pur.	Ref.
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3CH_2C(CH_3)_2(CH_2)_4CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	161.2	2
100	95.7	4
30	66.78	4
10	44.7	5
1	7.7	5
Pressure mm 25°C	3.1931	5
t_e	1176.	5
Density g/ml 20°C	0.7390	2
d^t_4 25	0.7351	2
30	0.7312	4
a	0.7546	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4165	2
25	1.4142	2
30	1.4114	4
"C"	0.7498	4
MR (Obs.)	48.36	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0470	2
Dielectric	2.007	5
A 70 to 215 °C	6.9713	5
B	1512.	5
C	208.	5
A* 70 to 190 °C	1.4723	5
B*	1422.1	5
K		
c		
t_k to t_x °C		
A' 25 to 70 °C	7.3308	5
B'	1716.0	5
C'	226.	5
A'* 25 to 70 °C	1.81491	5
B'*	1615.6	5
Ac 215 to t_c °C	7.7697	5
Bc	2267.	5
Cc	304.	5
Cryos. consts. A°		
B°		
t_e °C	179.15	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.0083	5
BP	0.05163	5
t_e	0.0367	5
30 mm	0.7250	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.66	5
30 mm	74.23	5
BP	63.25	5
t_e	61.24	5
t_e (d, e)	61.16	5
$\Delta Hv/T_e$	19.26	5
d 70 to 180 °C	81.99	5
e	0.1162	5
d' 25 to 70 °C	79.72	5
e'	0.0822	5
d_c g/ml	0.242	5
v_c ml/g	4.136	5
t_c °C	328.5	5
P_c mm	15304.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9342	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.57	5
30	22.59	5
40	21.63	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 90

NAME	3,4-Dimethyloctane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2CH(CH_3)CH(CH_3)(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	166.	2
100	99.9	4
30	70.7	4
10	48.4	5
1	11.1	5
Pressure mm 25°C	2.5603	5
t_e	1190.	5
Density g/ml 20°C	0.746	2
d_4^t 25	0.742	2
30	0.738	4
a	0.762	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.4182	2
25	1.4159	2
30	1.4135	4
"C"	0.7456	4
MR (Obs.)	48.1	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.011	5
A (70 to 225 °C)	6.9782	5
B	1530.	5
C	208.	5
A* (70 to 195 °C)	1.47457	5
B*	1439.7	5
K		
c		
t_k / t_x (to °C)		
A' (25 to 70 °C)	7.33417	5
B'	1734.7	5
C'	226.	5
A'* 25 to	1.81657	5
B'* 70 °C	1634.1	5
Ac (225 to t_c °C)	7.8161	5
Bc	2341.	5
Cc	310.	5
Cryos. consts. A°		
B°		
t_e °C	184.62	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.1341	5
BP	0.05208	5
t_e	0.0367	5
30 mm	0.7320	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.08	5
30 mm	75.22	5
BP	64.10	5
t_e	62.01	5
t_e (d, e)	61.92	5
ΔHv/T_e	19.27	5
d (70 to 185 °C)	83.48	5
e	0.1167	5
d' (25 to 70 °C)	81.19	5
e'	0.0844	5
d_c g/ml	0.242	5
v_c ml/g	4.128	5
t_c °C	335.8	5
P_c mm	15521.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9339	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	24.47	5
30	23.44	5
40	22.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 91

NAME	3, 5-Dimethyloctane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2CH(CH_3)CH_2CH(CH_3)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	160.	2
100	94.7	4
30	65.82	4
10	43.8	5
1	6.9	5
Pressure mm 25°C	3.3674	5
t_e	1172.	5
Density g/ml 20°C	0.736	2
d^t_4 25	0.732	2
30	0.728	4
a	0.752	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.408	4
"C"	0.7468	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.039	5
A 70 to	6.9710	5
B 215 °C	1508.	5
C	209.	5
A* 70 to	1.47305	5
B* 185 °C	1418.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33132	5
B' 70 °C	1711.9	5
C'	227.	5
A'* 25 to	1.81589	5
B'* 70 °C	1611.5	5
Ac 215 to	7.7550	5
Bc t_c °C	2243.	5
Cc	301.	5
Cryos. A° consts. B°		
t_e °C	177.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	9.4812	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.33	5
30 mm	74.00	5
BP	63.06	5
t_e	61.07	5
t_e (d, e)	60.99	5
$\Delta Hv/T_e$	19.27	5
d 70 to	81.65	5
e 175 °C	0.1162	5
d' 25 to	79.38	5
e' 70 °C	0.0817	5
d_c g/ml	0.240	5
v_c ml/g	4.170	5
t_c °C	325.8	5
P_c mm	15110.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.19	5
30	22.19	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 92

NAME	3,6-Dimethyloctane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH_2CH(CH_3)(CH_2)_2CH(CH_3)CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	160.	2
100	94.7	4
30	65.8	4
10	43.8	5
1	6.9	5
Pressure mm 25°C	3.3674	5
t_e	1172.	5
Density g/ml 20°C	0.7363	2
d^t_4 25	0.7324	2
30	0.7285	4
a	0.7519	4
b	-0.0378	4
Ref. Index n_D 20°C	1.4145	2
25	1.4122	2
30	1.4099	4
"C"	0.7491	4
MR (Obs.)	48.337	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0463	2
Dielectric	2.001	5
A 70 to	6.9710	5
B 215 °C	1508.	5
C	209.	5
A* 70 to	1.47305	5
B* 185 °C	1418.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33132	5
B' 70 °C	1711.89	5
C'	227.	5
A'* 25 to	1.81589	5
B'* 70 °C	1611.5	5
Ac 215 to	7.7581	5
Bc t_c °C	2247.	5
Cc	302.	5
Cryos. A° consts. B°		
t_e °C	177.78	5

		Ref.
dt/dP °C/mm		
25°C	4.7691	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.33	5
30 mm	74.00	5
BP	63.06	5
t_e	61.07	5
t_e (d,e)	60.99	5
ΔHv/T_e	19.27	5
d 70 to	81.65	5
e 175 °C	0.1162	5
d' 25 to	79.38	5
e' 70 °C	0.0817	5
d_c g/ml	0.241	5
v_c ml/g	4.147	5
t_c °C	326.4	5
P_c mm	15209.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.22	5
30	22.25	5
40	21.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 93

NAME	4, 4-Dimethyloctane
STRUCTURAL FORMULA	$CH_3(CH_2)_2C(CH_3)_2-(CH_2)_3CH_3$
Mole % Pur.	
Ref.	
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	161.	2
100	95.6	4
30	66.64	4
10	44.6	5
1	7.6	5
Pressure mm 25°C	3.2176	5
t_e	1175.	5
Density g/ml 20°C	0.737	2
d^t_4 25	0.733	2
30	0.729	4
a	0.753	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7475	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.000	5
A 70 to 215 °C	6.9720	5
B	1511.	5
C	208.	5
A* 70 to 190 °C	1.47331	5
B*	1421.8	5
K		
c		
t_k to t_x °C		
A' 25 to 70 °C	7.33180	5
B'	1715.69	5
C'	226.	5
A'* 25 to 70 °C	1.81600	5
B'*	1615.2	5
Ac 215 to t_c °C	7.7641	5
Bc	2257.	5
Cc	303.	5
Cryos. consts. A°		
B°		
t_e °C	178.92	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.9725	5
BP	0.05160	5
t_e	0.0367	5
30 mm	0.7246	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.62	5
30 mm	74.20	5
BP	63.23	5
t_e	61.22	5
t_e (d, e)	61.15	5
$\Delta Hv/T_e$	19.27	5
d 70 to 180 °C	81.95	5
e	0.1163	5
d' 25 to 70 °C	79.68	5
e'	0.0821	5
d_c g/ml	0.240	5
v_c ml/g	4.168	5
t_c °C	327.4	5
P_c mm	15157.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9342	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.31	5
30	22.31	5
40	21.35	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 94

NAME	4, 5-Dimethyloctane	STRUCTURAL FORMULA
		$CH_3(CH_2)_2CH(CH_3)-CH(CH_3)(CH_2)_2CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{10}H_{22}$	142.276

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	162.13	2
100	96.5	4
30	67.5	4
10	45.4	5
1	8.3	5
Pressure mm 25°C	3.0629	5
t_e	1178.	5
Density g/ml 20°C	0.7470	2
d^t_4 25	0.7432	2
30	0.7394	4
a	0.7622	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4190	2
25	1.4167	2
30	1.4145	4
"C"	0.7459	4
MR (Obs.)	48.10	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0455	2
Dielectric	2.013	5
A 70 to 220 °C	6.9719	5
B	1515.	5
C	208.	5
A* 70 to 190 °C	1.47193	5
B*	1425.2	5
K		
c		
t_k to t_x °C		
A' 25 to 70 °C	7.33061	5
B'	1719.3	5
C'	226.	5
A'* 25 to 70 °C	1.81443	5
B'*	1618.8	5
Ac 220 to t_c °C	7.7883	5
Bc	2295.	5
Cc	307.	5
Cryos. consts. A° B°		
t_e °C	180.22	5

		Ref.
dt/dP °C/mm 25°C	5.2038	5
BP	0.05173	5
t_e	0.0367	5
30 mm	0.7264	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.92	5
30 mm	74.41	5
BP	63.41	5
t_e	61.39	5
t_e (d, e)	61.31	5
ΔHv/T_e	19.26	5
d 70 to 180 °C	82.26	5
e	0.1162	5
d' 25 to 70 °C	79.99	5
e'	0.0826	5
d_c g/ml	0.246	5
v_c ml/g	4.062	5
t_c °C	331.6	5
P_c mm	15661.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9341	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^V A^V to °C		
(B^V) (A^V) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	24.60	5
30	23.62	5
40	22.66	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	95.8	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 95

NAME	4-Propylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3(CH_2)_2CH(C_3H_7)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	162.	2
100	96.4	4
30	67.5	4
10	45.3	5
1	8.3	5
Pressure mm 25°C	3.0744	5
t_e	1178.	5
Density g/ml 20°C	0.7364	2
d^t_4 25	0.7326	2
30	0.7288	4
a	0.7516	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4150	2
25	1.4127	2
30	1.4105	4
"C"	0.7498	4
MR (Obs.)	48.38	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0468	2
Dielectric	2.002	5
A 65 to 220 °C	6.9734	5
B	1515.	5
C	208.	5
A* 65 to 190 °C	1.47356	5
B*	1425.4	5
K		
c		
t_k to t_x °C		
A' 25 to 65 °C	7.33227	5
B'	1719.5	5
C'	226.	5
A'* 25 to 65 °C	1.81612	5
B'*	1619.0	5
Ac 220 to t_c °C	7.7776	5
Bc	2278.	5
Cc	305.	5
Cryos. consts. A° B°		
t_e °C	180.06	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1849	5
BP	0.05169	5
t_e	0.0367	5
30 mm	0.7261	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.91	5
30 mm	74.41	5
BP	63.41	5
t_e	61.38	5
t_e (d, e)	61.30	5
$\Delta Hv/T_e$	19.27	5
d 65 to 180 °C	82.26	5
e	0.1164	5
d' 25 to 65 °C	79.98	5
e'	0.0826	5
d_c g/ml	0.242	5
v_c ml/g	4.135	5
t_c °C	329.6	5
P_c mm	15334.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9342	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.24	5
30	22.29	5
40	21.37	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 96

NAME	4-Isopropylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3(CH_2)_2CH-(CH_2)_2CH_3$ with C_3H_7 on CH

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	160.	2
100	94.7	4
30	65.8	4
10	43.8	5
1	6.9	5
Pressure mm 25°C	3.3674	5
t_e	1172.	5
Density g/ml 20°C	0.741	2
d_4^t 25	0.737	2
30	0.733	4
a	0.757	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.417	2
25	1.415	2
30	1.412	4
"C"	0.7486	4
MR (Obs.)	48.3	2
MR (Calc.)	48.38	5
(nD-d/2)	1.047	2
Dielectric	2.008	5
A 70 to 215°C	6.9710	5
B	1508.	5
C	209.	5
A* 70 to 187°C	1.47305	5
B*	1418.2	5
K		
c		
t_k to t_x °C		
A' 25 to 70°C	7.33132	5
B'	1711.9	5
C'	227.	5
A'* 25 to 70°C	1.81589	5
B'*	1611.5	5
Ac 215 to t_c °C	7.7600	5
Bc	2250.	5
Cc	302.	5
Cryos. consts. A°		
B°		
t_e °C	177.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.7691	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.33	5
30 mm	74.00	5
BP	63.06	5
t_e	61.07	5
t_e (d, e)	61.00	5
$\Delta Hv/T_e$	19.27	5
d 70 to 175 °C	81.65	5
e	0.1161	5
d' 25 to 70 °C	79.38	5
e'	0.0817	5
d_c g/ml	0.242	5
v_c ml/g	4.133	5
t_c °C	326.7	5
P_c mm	15270.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.82	5
30	22.81	5
40	21.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 97

NAME	3-Ethyl-2-methylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)CH(C_2H_5)(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	166.	2
100	99.9	4
30	70.7	4
10	48.4	5
1	11.1	5
Pressure mm 25°C	2.5603	5
t_e	1189.	5
Density g/ml 20°C	0.746	2
d^t_4 25	0.742	2
30	0.738	4
a	0.762	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7452	4
MR (Obs.)	48.1	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.011	5
A 75 to 225 °C	6.9782	5
B	1530.	5
C	208.	5
A* 75 to 195 °C	1.47547	5
B*	1439.9	5
K		
c		
t_k to t_x °C		
A' 25 to 75 °C	7.33417	5
B'	1734.7	5
C'	226.	5
A'* 25 to 75 °C	1.81657	5
B'*	1634.1	5
Ac 225 to t_c °C	7.8159	5
Bc	2340.	5
Cc	310.	5
Cryos. A° consts. B°		
t_e °C	184.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.1341	5
BP	0.05208	5
t_e	0.0367	5
30 mm	0.7320	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.08	5
30 mm	75.22	5
BP	64.06	5
t_e	61.97	5
t_e (d, e)	61.89	5
ΔHv/T_e	19.26	5
d 75 to 185 °C	83.50	5
e	0.1171	5
d' 25 to 75 °C	81.19	5
e'	0.0844	5
d_c g/ml	0.242	5
v_c ml/g	4.129	5
t_c °C	335.8	5
P_c mm	15514.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9333	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.47	5
30	23.44	5
40	22.43	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 98

NAME	4-Ethyl-2-methylheptane	STRUCTURAL FORMULA
		$CH_3CH(CH_3)-CH_2CH(C_2H_5)-(CH_2)_2CH_3$

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	160.	2
100	94.7	4
30	65.9	4
10	43.8	5
1	7.0	5
Pressure mm 25°C	3.3554	5
t_e	1172.	5
Density g/ml 20°C	0.736	2
d_4^t 25	0.732	2
30	0.728	4
a	0.752	4
b	-0.038	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.408	4
"C"	0.7468	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	1.996	5
A 70 to	6.9737	5
B 215 °C	1509.	5
C	209.	5
A* 70 to	1.47578	5
B* 185 °C	1419.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33416	5
B' 70 °C	1713.	5
C'	227.	5
A'* 25 to	1.81869	5
B'* 70 °C	1612.6	5
Ac 215 to	7.7575	5
Bc t_c °C	2243.	5
Cc	301.	5
Cryos. A° consts. B°		
t_e °C	177.77	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.4812	5
BP	0.05146	5
t_e	0.0367	5
30 mm	0.7229	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.38	5
30 mm	74.04	5
BP	63.10	5
t_e	61.11	5
t_e (d, e)	61.03	5
$\Delta Hv/T_e$	19.28	5
d 70 to	81.70	5
e 175 °C	0.1163	5
d' 25 to	79.43	5
e' 70 °C	0.0817	5
d_c g/ml	0.240	5
v_c ml/g	4.163	5
t_c °C	325.8	5
P_c mm	15136.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.19	5
30	22.19	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 99

NAME	5-Ethyl-2-methylheptane		
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

STRUCTURAL FORMULA

$CH_3CH(CH_3)(CH_2)_2CH(C_2H_5)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	159.7	2
100	94.4	4
30	65.5	4
10	43.5	5
1	6.6	5
Pressure mm 25°C	3.42450	5
t_e	1171.	5
Density g/ml 20°C	0.736	2
d_4^t 25	0.732	2
30	0.728	4
a	0.752	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.4134	2
25	1.4109	2
30	1.4086	4
"C"	0.7475	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	1.998	5
A 70 to 215 °C	6.9681	5
B	1506.	5
C	209.	5
A* 70 to 185 °C	1.47051	5
B*	1416.2	5
K		
c		
t_k to t_x °C		
A' 25 to 70 °C	7.32861	5
B'	1709.8	5
C'	227.	5
A'* 25 to 70 °C	1.81332	5
B'*	1609.4	5
Ac 215 to t_c °C	7.7503	5
Bc	2238.	5
Cc	301.	5
Cryos. consts. A° B°		
t_e °C	177.45	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.6975	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7229	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.20	5
30 mm	73.90	5
BP	62.97	5
t_e	60.98	5
t_e (d, e)	60.91	5
$\Delta Hv/T_e$	19.25	5
d 70 to 175 °C	81.51	5
e	0.1161	5
d' 25 to 70 °C	79.24	5
e'	0.0815	5
d_c g/ml	0.240	5
v_c ml/g	4.175	5
t_c °C	325.4	5
P_c mm	15082.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	23.19	5
30	22.19	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 100

NAME	3-Ethyl-3-methylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH_2C(C_2H_5)(CH_3)-(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	163.8	2
100	97.98	4
30	68.89	4
10	46.67	5
1	9.50	5
Pressure mm 25°C	2.838	5
t_e	1183.2	5
Density g/ml 20°C	0.7501	2
d^t_4 25	0.7463	2
30	0.7425	5
a	0.7653	5
b	$-0.0_{3}76$	5
Ref. Index n_D 20°C	1.4208	2
25	1.4190	
30	1.4163	4
"C"	0.7459	4
MR (Obs.)	48.08	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0458	2
Dielectric	2.019	5
A 68 to 223 °C	6.9739	5
B	1521.3	5
C	208.	5
A* 68 to 200 °C	1.4724	5
B*	1431.2	5
K		
c		
t_k to °C		
t_x		
A' 20 to 68 °C	7.3314	5
B'	1725.6	5
C'	226.0	5
A'* 20 to 68 °C	1.8147	5
B'*	1625.2	5
Ac 223 to t_c °C	7.8061	5
Bc	2323.9	5
Cc	309.6	5
Cryos. consts. A°		
B°		
t_e °C	182.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.5814	5
BP	0.05189	5
t_e	0.03670	5
30 mm	0.7289	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.41	5
30 mm	74.75	5
BP	63.70	5
t_e	61.65	5
t_e (d, e)	61.57	5
ΔHv/T_e	19.26	5
d 68 to 182 °C	82.77	5
e	0.1164	5
d' 20 to 68 °C	80.49	5
e'	0.0834	5
d_c g/ml	0.247	5
v_c ml/g	4.045	5
t_c °C	334.	5
P_c mm	15790.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9340	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.01	5
30	24.01	5
40	23.04	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 101

NAME	4-Ethyl-3-methylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH_2CH(CH_3)CH(C_2H_5)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	167.	2
100	100.8	4
30	71.5	4
10	49.2	5
1	11.7	5
Pressure mm 25°C	2.4454	5
t_e	1192.	5
Density g/ml 20°C	0.753	2
d_4^t 25	0.749	2
30	0.745	4
a	0.769	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.422	2
25	1.419	2
30	1.417	4
"C"	0.7450	4
MR (Obs.)	48.0	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.022	5
A (75 to 230 °C)	6.9794	5
B	1534.	5
C	207.	5
A* (75 to 195 °C)	1.47482	5
B*	1443.3	5
K		
c		
t_k to t_x °C		
A' (25 to 75 °C)	7.33464	5
B'	1738.4	5
C'	225.	5
A'* 25 to	1.81669	5
B'* 75 °C	1637.9	5
Ac (230 to t_c °C)	7.8330	5
Bc	2367.	5
Cc	313.	5
Cryos. consts. A°		
B°		
t_e °C	185.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.3987	5
BP	0.05218	5
t_e	0.0367	5
30 mm	0.7335	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.37	5
30 mm	75.43	5
BP	64.27	5
t_e	62.17	5
t_e (d, e)	62.08	5
ΔHv/T_e	19.27	5
d (75 to 185 °C)	83.78	5
e	0.1168	5
d' (25 to 75 °C)	81.49	5
e'	0.0848	5
d_c g/ml	0.245	5
v_c ml/g	4.081	5
t_c °C	338.4	5
P_c mm	15764.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9338	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B_v^v, A_v^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.40	5
30	24.34	5
40	23.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 102

NAME	5-Ethyl-3-methylheptane	STRUCTURAL FORMULA
		$CH_3CH_2CH(CH_3)CH_2CH(C_2H_5)CH_2CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{10}H_{22}$	142.276

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	161.	2
100	95.6	4
30	66.6	4
10	44.6	5
1	7.6	5
Pressure mm 25°C	3.2076	5
t_e	1175.	5
Density g/ml 20°C	0.743	2
d_4^t 25	0.739	2
30	0.735	4
a	0.759	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7449	4
MR (Obs.)	48.1	2
MR (Calc.)	48.38	5
(nD-d/2)	1.044	2
Dielectric	2.005	5
A (67 to 214 °C)	6.9722	5
B	1511.	5
C	208.	5
A* (67 to 189 °C)	1.47331	5
B*	1421.8	5
K		
c		
t_k to t_x °C		
A' (25 to 67 °C)	7.33180	5
B'	1715.7	5
C'	226.	5
A'* (25 to 67 °C)	1.82417	5
B'*	1617.6	5
Ac (214 to t_c °C)	7.7702	5
Bc	2266.	5
Cc	304.	5
Cryos. consts. A°		
B°		
t_e °C	178.92	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.9880	5
BP	0.05160	5
t_e	0.0367	5
30 mm	0.7246	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.62	5
30 mm	74.20	5
BP	63.23	5
t_e	61.23	5
t_e (d, e)	61.15	5
$\Delta Hv/T_e$	19.27	5
d (67 to 179 °C)	81.95	5
e	0.1162	5
d' (25 to 67 °C)	79.68	5
e'	0.0821	5
d_c g/ml	0.243	5
v_c ml/g	4.120	5
t_c °C	328.	5
P_c mm	15349.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9342	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. 20°C	24.08	5
γ 30	23.06	5
40	22.07	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 103

NAME	3-Ethyl-4-methylheptane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2CH(C_2H_5)CH(CH_3)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	167.	2
100	100.8	4
30	71.5	4
10	49.2	5
1	11.7	5
Pressure mm 25°C	2.4454	5
t_e	1191.	5
Density g/ml 20°C	0.753	2
d_4^t 25	0.749	2
30	0.745	4
a	0.769	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.422	2
25	1.419	2
30	1.417	4
"C"	0.7450	4
MR (Obs.)	48.0	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.022	5
A 75 to 230 °C	6.9794	5
B	1534.	5
C	207.	5
A* 75 to 195 °C	1.47661	5
B*	1443.8	5
K		
c		
t_k to t_x °C		
A' 25 to 75 °C	7.33464	5
B'	1738.4	5
C'	225.	5
A'* 25 to 75 °C	1.81669	5
B'*	1637.9	5
Ac 230 to t_c °C	7.8325	5
Bc	2366.	5
Cc	313.	5
Cryos. consts. A°		
B°		
t_e °C	185.70	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.3987	5
BP	0.05218	5
t_e	0.0367	5
30 mm	0.7335	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.37	5
30 mm	75.43	5
BP	64.20	5
t_e	62.10	5
t_e (d, e)	62.01	5
ΔHv/T_e	19.25	5
d 75 to 185 °C	83.83	5
e	0.1175	5
d' 25 to 75 °C	81.49	5
e'	0.0848	5
d_c g/ml	0.245	5
v_c ml/g	4.084	5
t_c °C	338.3	5
P_c mm	15750.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9327	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.40	5
30	24.34	5
40	23.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 104

NAME	4-Ethyl-4-methylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3(CH_2)_2C(C_2H_5)(CH_3) - (CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	167.	2
100	100.8	4
30	71.5	4
10	49.2	5
1	11.7	5
Pressure mm 25°C	2.4454	5
t_e	1191.	5
Density g/ml 20°C	0.752	2
d^t_4 25	0.748	2
30	0.744	4
a	0.768	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.421	2
25	1.419	2
30	1.416	4
"C"	0.7443	4
MR (Obs.)	48.0	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.019	5
A 72 to 228 °C	6.9794	5
B	1534.	5
C	207.	5
A* 72 to 196 °C	1.47661	5
B*	1443.8	5
K		
c		
t_k to t_x °C		
A' 25 to 72 °C	7.33464	5
B'	1738.4	5
C'	225.	5
A'* 25 to 72 °C	1.81669	5
B'*	1637.9	5
Ac 228 to t_c °C	7.8314	5
Bc	2364.	5
Cc	312.	5
Cryos. consts. A° B°		
t_e °C	185.70	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.3987	5
BP	0.05218	5
t_e	0.0367	5
30 mm	0.7335	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.37	5
30 mm	75.43	5
BP	64.20	5
t_e	62.10	5
t_e (d, e)	62.01	5
ΔHv/T_e	19.25	5
d 72 to 186 °C	83.83	5
e	0.1175	5
d' 25 to 72 °C	81.49	5
e'	0.0848	5
d_c g/ml	0.244	5
v_c ml/g	4.091	5
t_c °C	338.	5
P_c mm	15717.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9327	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.27	5
30	24.21	5
40	23.18	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 105

NAME	2, 2, 3-Trimethylheptane
Mole % Pur.	
Ref.	
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3C(CH_3)_2-CH(CH_3)-(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	158.	2
100	92.9	4
30	64.2	4
10	42.2	5
1	5.5	5
Pressure mm 25°C	3.7001	5
t_e	1167.	5
Density g/ml 20°C	0.742	2
d^t_4 25	0.738	2
30	0.734	4
a	0.758	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.417	2
25	1.414	2
30	1.412	4
"C"	0.7476	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.008	5
A 65 to	6.9658	5
B 210 °C	1499.	5
C	209.	5
A* 65 to	1.46977	5
B* 185 °C	1410.0	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.32751	5
B' 65 °C	1703.2	5
C'	227.	5
A'* 25 to	1.81284	5
B'* 65 °C	1602.8	5
Ac 210 to	7.7423	5
Bc t_c °C	2224.	5
Cc	301.	5
Cryos. A° consts. B°		
t_e °C	175.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.37554	5
BP	0.05134	5
t_e	0.0367	5
30 mm	0.7204	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.71	5
30 mm	73.55	5
BP	62.68	5
t_e	60.72	5
t_e (d, e)	60.65	5
$\Delta Hv/T_e$	19.25	5
d 65 to	80.98	5
e 175 °C	0.1158	5
d' 25 to	78.73	5
e' 65 °C	0.0808	5
d_c g/ml	0.243	5
v_c ml/g	4.122	5
t_c °C	324.1	5
P_c mm	15244.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9345	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.95	5
30	22.93	5
40	21.94	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 106

NAME	2, 2, 4-Trimethylheptane	STRUCTURAL FORMULA
		$CH_3C(CH_3)_2 - CH_2CH(CH_3)(CH_2)_2CH_3$

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	147.7	2
100	82.96	4
30	54.52	4
10	32.86	5
1	-3.27	5
Pressure mm 25°C	6.4065	5
t_e	1142.1	5
Density g/ml 20°C	0.7275	2
d^t_4 25	0.7237	2
30	0.7199	4
a	0.7427	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4092	2
25	1.4070	2
30	1.4046	4
"C"	0.7490	4
MR (Obs.)	48.37	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0454	2
Dielectric	1.986	5
A 54 to 195°C	6.8795	5
B	1434.1	5
C	211.	5
A* 54 to 174°C	1.3879	5
B*	1345.3	5
K		
c		
t_k to t_x °C		
A' 25 to 54°C	7.2458	5
B'	1635.1	5
C'	229.	5
A'* 25 to 54°C	1.7359	5
B'*	1535.2	5
Ac 195 to t_c °C	7.5887	5
Bc	2068.0	5
Cc	292.5	5
Cryos. A° consts. B°		
t_e °C	164.30	5

		Ref.
dt/dP °C/mm 25°C	2.6734	5
BP	0.05125	5
t_e	0.03733	5
30 mm	0.7113	5
ΔHm cal/g		
ΔHv cal/g 25°C	72.51	5
30 mm	70.29	5
BP	60.0	5
t_e	58.21	5
t_e (d, e)	58.16	5
$\Delta Hv/T_e$	18.93	5
d 54 to 164 °C	76.32	5
e	0.1105	5
d' 25 to 54 °C	74.39	5
e'	0.0752	5
d_c g/ml	0.231	5
v_c ml/g	4.329	5
t_c °C	309.	5
P_c mm	14147.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9383	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.13	5
30	21.22	5
40	20.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	100.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.80 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 107

NAME	2, 2, 5-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)_2-(CH_2)_2CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	148.	2
100	84.2	4
30	56.0	4
10	34.5	5
1	-1.5	5
Pressure mm 25°C	5.7968	5
t_e	1144.	5
Density g/ml 20°C	0.726	2
d_4^t 25	0.722	2
30	0.718	4
a	0.742	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.409	2
25	1.407	2
30	1.404	4
"C"	0.7502	4
MR (Obs.)	48.5	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	1.985	5
A 56 to 192 °C	6.9532	5
B	1462.	5
C	211.	5
A* 56 to 174 °C	1.45980	5
B*	1372.3	5
K		
c		
t_k to t_x °C		
A' 25 to 56 °C	7.32254	5
B'	1665.3	5
C'	229.	5
A'* 25 to 56 °C	1.81153	5
B'*	1565.1	5
Ac 192 to t_c °C	7.6549	5
Bc	2085.	5
Cc	290.	5
Cryos. consts. A°		
B°		
t_e °C	164.36	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.900	5
BP	0.05036	5
t_e	0.0366	5
30 mm	0.7055	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.88	5
30 mm	71.52	5
BP	61.21	5
t_e	59.42	5
t_e (d, e)	59.38	5
$\Delta Hv/T_e$	19.32	5
d 56 to 164 °C	77.79	5
e	0.1120	5
d' 25 to 56 °C	75.79	5
e'	0.0763	5
d_c g/ml	0.239	5
v_c ml/g	4.176	5
t_c °C	308.	5
P_c mm	14639.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9395	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.95	5
30	20.99	5
40	20.07	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	100.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 108

NAME	2,2,6-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)_2-(CH_2)_3CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	148.2	2
100	84.3	4
30	56.2	4
10	34.6	5
1	-1.3	5
Pressure mm 25°C	5.7529	5
t_e	1144.	5
Density g/ml 20°C	0.7195	2
d_4^t 25	0.7156	2
30	0.7117	4
a	0.7351	4
b	-0.0₃78	4
Ref. Index n_D 20°C	1.4059	2
25	1.4036	2
30	1.4012	4
"C"	0.7516	4
MR (Obs.)	48.56	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0461	2
Dielectric	1.976	5
A 56 to 182 °C	6.9524	5
B	1462.	5
C	211.	5
A* 56 to 175 °C	1.45874	5
B*	1372.6	5
K		
c		
t_k to t_x °C		
A' 25 to 56 °C	7.32148	5
B'	1665.6	5
C'	229.	5
A'* 25 to 56 °C	1.81041	5
B'*	1565.4	5
Ac 182 to t_c °C	7.6521	5
Bc	2083.	5
Cc	289.	5
Cryos. consts. A° B°		
t_e °C	164.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.9204	5
BP	0.05039	5
t_e	0.0366	5
30 mm	0.7059	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.92	5
30 mm	71.54	5
BP	61.22	5
t_e	59.43	5
t_e (d, e)	59.39	5
ΔHv/T_e	19.31	5
d 56 to 165 °C	77.83	5
e	0.1121	5
d' 25 to 56 °C	75.83	5
e'	0.0764	5
d_c g/ml	0.237	5
v_c ml/g	4.214	5
t_c °C	308.	5
P_c mm	14510.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9395	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.17	5
30	20.27	5
40	19.39	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.80 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 109

NAME	2, 3, 3-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)C(CH_3)_2(CH_2)_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	160.	2
100	94.7	4
30	65.8	4
10	43.8	5
1	6.9	5
Pressure mm 25°C	3.3674	5
t_e	1172.	5
Density g/ml 20°C	0.7488	2
d^t_4 25	0.7448	2
30	0.7408	4
a	0.7648	4
b	-0.0380	4
Ref. Index n_D 20°C	1.4202	2
25	1.4178	2
30	1.4153	4
"C"	0.7461	4
MR (Obs.)	48.10	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0458	2
Dielectric	2.017	5
A 66 to	6.9710	5
B 214 °C	1508.	5
C	209.	5
A* 66 to	1.47305	5
B* 188 °C	1418.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33132	5
B' 66 °C	1711.9	5
C'	227.	5
A'* 25 to	1.81589	5
B'* 66 °C	1611.5	5
Ac 214 to	7.7679	5
Bc t_c °C	2261.	5
Cc	304.	5
Cryos. consts. A°		
B°		
t_e °C	177.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.76914	5
BP	0.05150	5
t_e	0.0367	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.33	5
30 mm	74.00	5
BP	63.07	5
t_e	61.08	5
t_e (d, e)	61.00	5
$\Delta Hv/T_e$	19.27	5
d 66 to	81.64	5
e 178 °C	0.1161	5
d' 25 to	79.38	5
e' 66 °C	0.0817	5
d_c g/ml	0.245	5
v_c ml/g	4.075	5
t_c °C	328.	5
P_c mm	15519.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.84	5
30	23.79	5
40	22.78	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l.%/wt.		
u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 110

NAME	2, 3, 4-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)CH(CH_3)CH(CH_3)(CH_2)_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	163.	2
100	97.3	4
30	68.3	4
10	46.1	5
1	9.0	5
Pressure mm 25°C	2.9372	5
t_e	1181.	5
Density g/ml 20°C	0.751	2
d_4^t 25	0.747	2
30	0.743	4
a	0.767	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.421	2
25	1.418	2
30	1.416	4
"C"	0.7453	4
MR (Obs.)	48.0	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.019	5
A (68 to 224 °C)	6.9746	5
B	1519.	5
C	208.	5
A* (68 to 191 °C)	1.47382	5
B*	1428.9	5
K		
c		
t_k (to °C)		
t_x		
A' (25 to 68 °C)	7.33275	5
B'	1723.3	5
C'	226.	5
A'* 25 to	1.81623	5
B'* 68 °C	1622.8	5
Ac (224 to t_c °C)	7.7955	5
Bc	2305.	5
Cc	308.	5
Cryos. consts. A°		
B°		
t_e °C	181.20	5

		Ref.
dt/dP °C/mm 25°C	5.4068	5
BP	0.05179	5
t_e	0.0367	5
30 mm	0.7276	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.20	5
30 mm	74.61	5
BP	63.58	5
t_e	61.55	5
t_e (d, e)	61.47	5
ΔHv/T_e	19.27	5
d (68 to 181 °C)	82.56	5
e	0.1164	5
d' (25 to 68 °C)	80.28	5
e'	0.0830	5
d_c g/ml	0.245	5
v_c ml/g	4.078	5
t_c °C	333.	5
P_c mm	15637.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9341	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	25.13	5
30	24.08	5
40	23.05	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 111

NAME	2, 3, 5-Trimethylheptane
Mole % Pur.	
Ref.	
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3CH(CH_3)CH(CH_3)CH_2CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	157.	2
100	91.05	4
30	62.05	4
10	39.97	5
1	3.12	5
Pressure mm 25°C	4.2557	5
t_e	1164.4	5
Density g/ml 20°C	0.741	2
d_4^t 25	0.737	2
30	0.733	4
a	0.757	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7469	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.005	5
A 62 to 210 °C	6.89044	5
B	1468.2	5
C	209.2	5
A* 62 to 185 °C	1.39506	5
B*	1379.2	5
K		
c		
t_k to t_x °C		
A' 25 to 62 °C	7.24970	5
B'	1669.6	5
C'	227.2	5
A'* 25 to	1.73638	5
B'* 62 °C	1569.4	5
Ac 210 to t_c °C	7.66447	5
Bc	2190.1	5
Cc	302.1	5
Cryos. consts. A°		
B°		
t_e °C	174.74	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.8869	5
BP	0.05219	5
t_e	0.03744	5
30 mm	0.7253	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.08	5
30 mm	72.14	5
BP	61.37	5
t_e	59.43	5
t_e (d, e)	59.36	5
$\Delta Hv/T_e$	18.88	5
d 62 to 175 °C	79.19	5
e	0.1135	5
d' 25 to 62 °C	77.06	5
e'	0.0793	5
d_c g/ml	0.231	5
v_c ml/g	4.327	5
t_c °C	323.	5
P_c mm	14494.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9343	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.82	5
30	22.81	5
40	21.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

TR = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 112

NAME	2, 3, 6-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$
Molecular Weight 142.276		$CH_3CH(CH_3)CH(CH_3)(CH_2)_2CH(CH_3)-CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	155.7	2
100	89.92	4
30	60.99	4
10	38.97	5
1	2.22	5
Pressure mm 25°C	4.5093	5
t_e	1161.4	5
Density g/ml 20°C	0.7345	2
d^t_4 25	0.7305	2
30	0.7265	4
a	0.7505	4
b	$-0.0_{3}80$	4
Ref. Index n_D 20°C	1.4125	2
25	1.4101	2
30	1.4077	4
"C"	0.7475	4
MR (Obs.)	48.25	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0453	2
Dielectric	1.995	5
A 60 to	6.88867	5
B 207 °C	1463.3	5
C	209.4	5
A* 60 to	1.39367	5
B* 183 °C	1374.3	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.24889	5
B' 60 °C	1664.6	5
C'	227.4	5
A'* 25 to	1.73605	5
B'* 60 °C	1564.5	5
Ac 207 to	7.64810	5
Bc t_c °C	2165.1	5
Cc	299.6	5
Cryos. A° consts. B°		
t_e °C	173.29	5

		Ref.
dt/dP °C/mm 25°C	3.6863	5
BP	0.05206	5
t_e	0.03743	5
30 mm	0.7234	5
ΔHm cal/g		
ΔHv cal/g 25°C	74.71	5
30 mm	71.88	5
BP	61.18	5
t_e	59.26	5
t_e (d, e)	59.19	5
ΔHv/T_e	18.88	5
d 60 to	78.77	5
e 173 °C	0.1130	5
d' 25 to	76.68	5
e' 60 °C	0.0787	5
d_c g/ml	0.229	5
v_c ml/g	4.368	5
t_c °C	320.	5
P_c mm	14287.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9349	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	23.00	5
γ 30	22.01	5
40	21.05	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 113

NAME	2,4,4-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH\text{-}CH_2C(CH_3)_2(CH_2)_2CH_3$ with CH_3 on C2

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	153.	2
100	87.56	4
30	58.80	4
10	36.90	5
1	0.3555	5
Pressure mm 25°C	5.0832	5
t_e	1108.	5
Density g/ml 20°C	0.733	2
d^t_4 25	0.729	2
30	0.723	4
a	0.7590	4
b	-0.0012	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7462	4
MR (Obs.)	48.3	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	1.994	5
A (59 to 197 °C)	6.88497	5
B	1453.2	5
C	209.9	5
A* (59 to 178 °C)	1.39259	5
B*	1364.7	5
K		
c		
t_k to t_x °C		
A' (20 to 59 °C)	7.24720	5
B'	1654.4	5
C'	228.	5
A'* (20 to 59 °C)	1.73534	5
B'*	1554.4	5
Ac (197 to t_c °C)	7.58044	5
Bc	2068.0	5
Cc	287.7	5
Cryos. consts. A°		
B°		
t_e °C	167.81	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.3037	5
BP	0.05179	5
t_e	0.03743	5
30 mm	0.7194	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.95	5
30 mm	71.33	5
BP	60.68	5
t_e	58.77	5
t_e (d, e)	58.73	5
$\Delta Hv/T_e$	18.85	5
d (59 to 168 °C)	77.99	5
e	0.1133	5
d' (20 to 59 °C)	75.89	5
e'	0.0775	5
d_c g/ml	0.208	5
v_c ml/g	4.804	5
t_c °C	307.	5
P_c mm	12706.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9352	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.06	5
30	21.59	5
40	20.18	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 114

NAME	2,4,5-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)CH_2CH(CH_3)CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	157.	2
100	91.05	4
30	62.05	4
10	39.97	5
1	3.12	5
Pressure mm 25°C	4.2557	5
t_e	1165.1	5
Density g/ml 20°C	0.741	2
d_4^t 25	0.737	2
30	0.733	4
a	0.757	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.4160	2
25	1.4137	2
30	1.4113	4
"C"	0.7469	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.005	5
A (62 to 210 °C)	6.89044	5
B	1468.2	5
C	209.	5
A* (62 to 185 °C)	1.39418	5
B*	1378.9	5
K		
c		
t_k to t_x °C		
A' (20 to 62 °C)	7.24970	5
B'	1669.6	5
C'	227.	5
A'* 20 to	1.73638	5
B'* 62 °C	1569.4	5
Ac (210 to t_c °C)	7.6647	5
Bc	2190.	5
Cc	302.	5
Cryos. consts. A°		
B°		
t_e °C	174.74	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.8869	5
BP	0.05219	5
t_e	0.0374	5
30 mm	0.7253	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.08	5
30 mm	72.14	5
BP	61.40	5
t_e	59.48	5
t_e (d, e)	59.39	5
ΔHv/T_e	18.89	5
d (62 to 175 °C)	79.16	5
e	0.1131	5
d' (20 to 62 °C)	77.06	5
e'	0.0793	5
d_c g/ml	0.231	5
v_c ml/g	4.325	5
t_c °C	323.	5
P_c mm	14500.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9348	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.82	5
30	22.81	5
40	21.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. 1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 115

NAME	2,4,6-Trimethylheptane
Mole % Pur.	
Ref.	
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3CH(CH_3)CH_2CH(CH_3)CH_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	144.8	2
100	80.41	4
30	52.13	4
10	30.6	5
1	-5.3	5
Pressure mm 25°C	7.2873	5
t_e	1133.7	5
Density g/ml 20°C	0.7225	2
d_4^t 25	0.7184	2
30	0.7143	4
a	0.7389	4
b	-0.0382	4
Ref. Index n_D 20°C	1.4071	2
25	1.4046	2
30	1.4022	4
"C"	0.7505	4
MR (Obs.)	48.48	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0459	2
Dielectric	1.980	5
A (52 to 188 °C)	6.87377	5
B	1422.6	5
C	211.5	5
A* (52 to 171 °C)	1.38504	5
B*	1334.4	5
K		
c		
t_k to t_x °C		
A' (5 to 52 °C)	7.24226	5
B'	1623.5	5
C'	229.	5
A'* 15 to	1.73344	5
B'* 52 °C	1523.7	5
Ac (188 to t_c °C)	7.55659	5
Bc	2021.3	5
Cc	288.3	5
Cryos. consts. A°		
B°		
t_e °C	161.00	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.3773	5
BP	0.05099	5
t_e	0.0373	5
30 mm	0.7071	5
ΔHm cal/g		
ΔHv cal/g 25°C	71.69	5
30 mm	69.68	5
BP	59.47	5
t_e	57.73	5
t_e (d, e)	57.68	5
ΔHv/T_e	18.92	5
d (52 to 161 °C)	75.43	5
e	0.1102	5
d' (15 to 52 °C)	73.53	5
e'	0.0739	5
d_c g/ml	0.226	5
v_c ml/g	4.418	5
t_c °C	303.	5
P_c mm	13721.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9385	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.53	5
30	20.57	5
40	19.63	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.80 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 116

NAME	2, 5, 5-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	
Molecular Formula	$C_{10}H_{22}$	
Molecular Weight	142.276	$CH_3CH(CH_3)(CH_2)_2C(CH_3)_2CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	152.80	2
100	87.3	4
30	58.5	4
10	36.6	5
1	0.1	5
Pressure mm 25°C	5.1621	5
t_e	1153.	5
Density g/ml 20°C	0.7368	2
d^t_4 25	0.7328	2
30	0.7288	4
a	0.7528	4
b	-0.0₃80	4
Ref. Index n_D 20°C	1.4136	2
25	1.4112	2
30	1.4088	4
"C"	0.7471	4
MR (Obs.)	48.21	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0452	2
Dielectric		
A 59 to 205 °C	6.8794	5
B	1451.	5
C	210.	5
A* 59 to 180 °C	1.38718	5
B*	1362.	5
K		
c		
t_k to t_x °C		
A' 10 to 59 °C	7.24154	5
B'	1651.6	5
C'	228.	5
A'* 20 to 59 °C	1.72983	5
B'*	1551.5	5
Ac 205 to t_c °C	7.6227	5
Bc	2130.	5
Cc	298.	5
Cryos. consts. A° B°		
t_e °C	170.01	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.2598	5
BP	0.05184	5
t_e	0.0375	5
30 mm	0.7195	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.80	5
30 mm	71.21	5
BP	60.60	5
t_e	58.74	5
t_e (d, e)	58.67	5
ΔHv/T_e	18.86	5
d 59 to 170 °C	77.80	5
e	0.1125	5
d' 15 to 59 °C	75.74	5
e'	0.0773	5
d_c g/ml	0.230	5
v_c ml/g	4.351	5
t_c °C	317.	5
P_c mm	14258.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9351	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.29	5
30	22.29	5
40	21.32	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 117

NAME	3,3,4-Trimethylheptane

STRUCTURAL FORMULA

$$CH_3CH_2\underset{CH_3}{\overset{CH_3}{C}}\ \underset{CH_3}{CH}(CH_2)_2CH_3$$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{10}H_{22}$	142.276

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.	2
100	97.1	4
30	67.7	4
10	45.3	5
1	7.9	5
Pressure mm 25°C	3.1136	5
t_e	1184.	5
Density g/ml 20°C	0.757	2
d^t_4 25	0.753	2
30	0.749	4
a	0.773	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.420	4
"C"	0.7444	4
MR (Obs.)	47.9	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.028	5
A 68 to 227 °C	6.8988	5
B	1494.	5
C	208.	5
A* 68 to 193 °C	1.39669	5
B*	1403.7	5
K		
c		
t_k to t_x °C		
A' 20 to 68 °C	7.25291	5
B'	1695.6	5
C'	226.	5
A'* 20 to 68 °C	1.73706	5
B'*	1595.4	5
Ac 227 to t_c °C	7.7400	5
Bc	2310.	5
Cc	313.	5
Cryos. consts. A°		
B°		
t_e °C	182.73	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1760	5
BP	0.05288	5
t_e	0.0374	5
30 mm	0.7358	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.06	5
30 mm	73.54	5
BP	62.56	5
t_e	60.51	5
t_e (d,e)	60.42	5
$\Delta Hv/T_e$	18.88	5
d 68 to 183 °C	81.27	5
e	0.1141	5
d' 20 to 68 °C	79.12	5
e'	0.0824	5
d_c g/ml	0.236	5
v_c ml/g	4.246	5
t_c °C	336.	5
P_c mm	15079.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9337	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.95	5
30	24.87	5
40	23.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. I. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 Tc

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 118

NAME	3, 3, 5-Trimethylheptane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH_2C(CH_3)_2CH_2CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	155.68	2
100	89.9	4
30	60.96	4
10	38.9	5
1	2.2	5
Pressure mm 25°C	4.5187	5
t_e	1164.	5
Density g/ml 20°C	0.7428	2
d^t_4 25	0.7388	2
30	0.7348	4
a	0.7588	4
b	-0.0₃80	4
Ref. Index n_D 20°C	1.4170	2
25	1.4146	2
30	1.4128	4
"C"	0.7468	4
MR (Obs.)	48.17	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0456	2
Dielectric	2.008	5
A (61 to 209 °C)	6.8877	5
B	1463.	5
C	209.	5
A* (61 to 183 °C)	1.39006	5
B*	1373.2	5
K		
c		
t_k to t_x °C		
A' (20 to 61 °C)	7.24789	5
B'	1664.2	5
C'	227.	5
A'* 20 to	1.73506	5
B'* 61 °C	1564.1	5
Ac (209 to t_c °C)	7.6555	5
Bc	2176.	5
Cc	301.	5
Cryos. consts. A°		
B°		
t_e °C	173.35	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.6798	5
BP	0.05207	5
t_e	0.0374	5
30 mm	0.7234	5
ΔHm cal/g		
ΔHv cal/g 25°C	74.69	5
30 mm	71.86	5
BP	61.26	5
t_e	59.35	5
t_e (d, e)	59.28	5
ΔHv/T_e	18.91	5
d (61 to 173 °C)	78.68	5
e	0.1119	5
d' (20 to 61 °C)	76.66	5
e'	0.0787	5
d_c g/ml	0.232	5
v_c ml/g	4.303	5
t_c °C	322.	5
P_c mm	14542.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9365	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.05	5
30	23.03	5
40	22.04	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 119

NAME	3,4,4-Trimethylheptane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: $CH_3CH_2CH\,C(CH_3)\,(CH_2)_2CH_3$ with CH_3 on the CH and a second CH_3 on the C (drawn as CH₃ above C, CH₃CH₃ below).

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.	2
100	97.1	4
30	67.7	4
10	45.3	5
1	7.9	5
Pressure mm 25°C	3.1136	5
t_e	1184.	5
Density g/ml 20°C	0.757	2
d_4^t 25	0.753	2
30	0.749	4
a	0.773	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.420	4
"C"	0.7444	4
MR (Obs.)	47.9	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.028	5
A (68 to 227 °C)	6.8988	5
B	1494.	5
C	208.	5
A* (68 to 193 °C)	1.39669	5
B*	1403.7	5
K		
c		
t_k to t_x °C		
A' (20 to 68 °C)	7.25291	5
B'	1695.6	5
C'	226.	5
A'* (20 to 68 °C)	1.73706	5
B'*	1595.4	5
Ac (227 to t_c °C)	7.7400	5
Bc	2310.	5
Cc	313.	5
Cryos. consts. A°		
B°		
t_e °C	182.73	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1760	5
BP	0.05288	5
t_e	0.0374	5
30 mm	0.7358	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.06	5
30 mm	73.54	5
BP	62.56	5
t_e	60.51	5
t_e (d,e)	60.42	5
ΔHv/T_e	18.88	5
d (68 to 183 °C)	81.27	5
e	0.1141	5
d' (20 to 68 °C)	79.12	5
e'	0.0824	5
d_c g/ml	0.236	5
v_c ml/g	4.246	5
t_c °C	336.	5
P_c mm	15079.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9337	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.95	5
30	24.87	5
40	23.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 120

NAME	3, 4, 5-Trimethylheptane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: $CH_3CH_2CH(CH_3)CH(CH_3)CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.	2
100	96.97	4
30	67.56	4
10	45.16	5
1	7.77	5
Pressure mm 25°C	3.146	5
t_e	1190.3	5
Density g/ml 20°C	0.759	2
d^t_4 25	0.755	2
30	0.751	4
a	0.775	4
b	-0.0338	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7424	4
MR (Obs.)	47.832	4
MR (Calc.)	48.380	5
(nD-d/2)	1.044	2
Dielectric	2.028	5
A 68 to 225 °C	6.89880	5
B	1494.	5
C	208.	5
A* 68 to 193 °C	1.38938	5
B*	1401.63	5
K		
c		
t_k to t_x °C		
A' 15 to 68 °C	7.25295	5
B'	1695.56	5
C'	226.	5
A'* 20 to 68 °C	1.73702	5
B'*	1595.25	5
Ac 225 to t_c °C	7.74352	5
Bc	2315.88	5
Cc	314.01	5
Cryos. consts. A° B°		
t_e °C	182.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1294	5
BP	0.05288	5
t_e	0.03729	5
30 mm	0.7358	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.96	5
30 mm	73.47	5
BP	62.56	5
t_e	60.76	5
t_e (d, e)	60.44	5
ΔHv/T_e	18.96	5
d 68 to 183 °C	81.12	5
e	0.1131	5
d' 20 to 68 °C	79.01	5
e'	0.0820	5
d_c g/ml	0.245	5
v_c ml/g	4.080	5
t_c °C	335.9	5
P_c mm	15182.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9383	5
t_c	0.232	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	26.22	1
30	25.13	1
40	24.07	1
Parachor [P] 20°C	424.19	4
30	424.19	4
40	424.18	4
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 121

NAME	3-isopropyl-2-methylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)CH(C_3H_7)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	163.	2
100	97.3	4
30	68.3	4
10	46.1	5
1	9.0	5
Pressure mm 25°C	2.9372	5
t_e	1181.	5
Density g/ml 20°C	0.751	2
d_4^t 25	0.747	2
30	0.743	4
a	0.767	4
b	-0.038	4
Ref. Index n_D 20°C	1.421	2
25	1.418	2
30	1.416	4
"C"	0.7453	4
MR (Obs.)	48.0	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.019	5
A (68 to 224 °C)	6.9746	5
B	1519.	5
C	208.	5
A* (68 to 191 °C)	1.47382	5
B*	1428.9	5
K		
c		
t_k to t_x °C		
A' (20 to 68 °C)	7.33275	5
B'	1723.3	5
C'	226.	5
A'* 20 to	1.81623	5
B'* 68 °C	1622.8	5
Ac (224 to t_c °C)	7.7955	5
Bc	2305.	5
Cc	308.	5
Cryos. consts. A°		
B°		
t_e °C	181.20	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.4068	5
BP	0.05179	5
t_e	0.0367	5
30 mm	0.7276	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.20	5
30 mm	74.61	5
BP	63.58	5
t_e	61.55	5
t_e (d, e)	61.47	5
$\Delta Hv/T_e$	19.27	5
d (68 to 181 °C)	82.56	5
e	0.1164	5
d' (20 to 68 °C)	80.28	5
e'	0.0830	5
d_c g/ml	0.245	5
v_c ml/g	4.075	5
t_c °C	333.	5
P_c mm	15637.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9341	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.13	5
30	24.08	5
40	23.05	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l.%/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 122

NAME	3, 3-Diethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2C(C_2H_5)_2(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	166.3	2
100	100.2	4
30	70.9	4
10	48.6	5
1	11.3	5
Pressure mm 25°C	2.5272	5
t_e	1190.	5
Density g/ml 20°C	0.767	2
d_4^t 25	0.763	2
30	0.759	4
a	0.783	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.428	2
25	1.426	2
30	1.424	4
"C"	0.7412	4
MR (Obs.)	47.7	2
MR (Calc.)	48.38	5
(nD-d/2)	1.044	2
Dielectric	2.039	5
A (71 to 230 °C)	6.9780	5
B	1531.	5
C	207.	5
A* (71 to 195 °C)	1.4750	5
B*	1440.8	5
K		
c		
t_k to t_x °C		
A' (20 to 71 °C)	7.33375	5
B'	1735.6	5
C'	225.	5
A'* (20 to 71 °C)	1.81605	5
B'*	1635.1	5
Ac (230 to t_c °C)	7.8419	5
Bc	2379.	5
Cc	315.	5
Cryos. consts. A°		
B°		
t_e °C	184.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.2085	5
BP	0.05212	5
t_e	0.0367	5
30 mm	0.7325	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.16	5
30 mm	75.27	5
BP	64.12	5
t_e	62.03	5
t_e (d, e)	61.94	5
$\Delta Hv/T_e$	19.26	5
d (71 to 185 °C)	83.57	5
e	0.1170	5
d' (20 to 71 °C)	81.27	5
e'	0.0845	5
d_c g/ml	0.251	5
v_c ml/g	3.981	5
t_c °C	340.	5
P_c mm	16196.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9333	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	27.35	5
30	26.22	5
40	25.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	95.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 123

NAME	3, 4-Diethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276

STRUCTURAL FORMULA: $CH_3CH_2CH(C_2H_5)CH(C_2H_5)CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	162.	2
100	96.4	4
30	67.5	4
10	45.3	5
1	8.3	5
Pressure mm 25°C	3.0744	5
t_e	1178.	5
Density g/ml 20°C	0.754	2
d^t_4 25	0.750	2
30	0.746	4
a	0.770	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.420	2
25	1.418	2
30	1.415	4
"C"	0.7407	4
MR (Obs.)	47.8	2
MR (Calc.)	48.38	5
(nD-d/2)	1.043	2
Dielectric	2.016	5
A 67 to	6.9734	5
B 223 °C	1515.	5
C	208.	5
A* 67 to	1.47356	5
B* 190 °C	1425.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.33227	5
B' 67 °C	1719.5	5
C'	226.	5
A'* 25 to	1.81612	5
B'* 67 °C	1619.0	5
Ac 223 to	7.7900	5
Bc t_c °C	2296.	5
Cc	307.	5
Cryos. A° consts. B°		
t_e °C	180.06	5

		Ref.
dt/dP °C/mm 25°C	5.1849	5
BP	0.05169	5
t_e	0.0367	5
30 mm	0.7261	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.91	5
30 mm	74.41	5
BP	63.41	5
t_e	61.40	5
t_e (d, e)	61.31	5
ΔHv/T_e	19.27	5
d 67 to	82.25	5
e 180 °C	0.1163	5
d' 25 to	79.98	5
e' 67 °C	0.0826	5
d_c g/ml	0.247	5
v_c ml/g	4.050	5
t_c °C	332.	5
P_c mm	15718.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9342	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.54	5
30	24.47	5
40	23.43	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	94.6	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 124

NAME	3-Ethyl-2,2-dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)(CH_3)$ $CH(C_2H_5)$ $(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	159.	2
100	92.8	4
30	63.7	4
10	41.5	5
1	4.5	5
Pressure mm 25°C	3.8974	5
t_e	1170.	5
Density g/ml 20°C	0.749	2
d^t_4 25	0.745	2
30	0.741	4
a	0.765	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.420	2
25	1.418	2
30	1.415	4
"C"	0.7456	4
MR (Obs.)	48.1	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.016	5
A (64 to 213 °C)	6.8921	5
B	1475.	5
C	209.	5
A* (64 to 187 °C)	1.39567	5
B*	1386.2	5
K		
c		
t_k to t_x °C		
A' (25 to 64 °C)	7.24984	5
B'	1676.7	5
C'	227.	5
A'* 25 to	1.73581	5
B'* 64 °C	1576.5	5
Ac (213 to t_c °C)	7.6877	5
Bc	2227.	5
Cc	306.	5
Cryos. consts. A°		
B°		
t_e °C	177.00	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.2134	5
BP	0.05239	5
t_e	0.0375	5
30 mm	0.7284	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.63	5
30 mm	72.53	5
BP	61.67	5
t_e	59.70	5
t_e (d, e)	59.62	5
ΔHv/T_e	18.87	5
d (64 to 177 °C)	79.79	5
e	0.1139	5
d' (25 to 64 °C)	77.63	5
e'	0.0801	5
d_c g/ml	0.234	5
v_c ml/g	4.281	5
t_c °C	327.	5
P_c mm	14748.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9336	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.87	5
30	23.82	5
40	22.80	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 125

NAME	4-Ethyl-2, 2-dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)(CH_3)\ CH_2CH(C_2H_5)\ CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	147.	2
100	82.7	4
30	54.4	4
10	32.8	5
1	-3.2	5
Pressure mm 25°C	6.4021	5
t_e	1140.	5
Density g/ml 20°C	0.733	2
d^t_4 25	0.729	2
30	0.725	4
a	0.749	4
b	-0.038	4
Ref. Index n_D 20°C	1.4131	2
25	1.4107	2
30	1.4083	4
"C"	0.7501	4
MR (Obs.)	48.4	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0466	2
Dielectric	1.997	5
A 54 to 192 °C	6.9052	5
B	1441.	5
C	211.	5
A* 54 to 173 °C	1.41441	5
B*	1352.4	5
K		
c		
t_k to t_x °C		
A' 25 to 54 °C	7.27326	5
B'	1643.1	5
C'	229.	5
A'* 25 to 54 °C	1.76324	5
B'*	1543.0	5
Ac 192 to t_c °C	7.6092	5
Bc	2068.	5
Cc	291.	5
Cryos. consts. A°		
B°		
t_e °C	163.38	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.6651	5
BP	0.05084	5
t_e	0.0371	5
30 mm	0.7080	5
ΔHm cal/g		
ΔHv cal/g 25°C	72.79	5
30 mm	70.57	5
BP	60.28	5
t_e	58.50	5
t_e (d, e)	58.46	5
$\Delta Hv/T_e$	19.07	5
d 54 to 163 °C	76.62	5
e	0.1112	5
d' 25 to 54 °C	74.67	5
e'	0.0752	5
d_c g/ml	0.235	5
v_c ml/g	4.249	5
t_c °C	308.	5
P_c mm	14390.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9384	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.81	5
30	21.82	5
40	20.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.80 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 126

NAME	3-Ethyl-2,3-dimethylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276
			$CH_3CH\,C(C_2H_5)(CH_2)_2CH_3$ with CH_3 on each of CH and C

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	169.	2
100	101.5	4
30	71.8	4
10	49.2	5
1	11.4	5
Pressure mm 25°C	2.4826	5
t_e	1197.	5
Density g/ml 20°C	0.765	2
d^t_4 25	0.760	2
30	0.755	4
a	0.785	4
b	-0.0_21	4
Ref. Index n_D 20°C	1.427	2
25	1.424	2
30	1.421	4
"C"	0.7415	4
MR (Obs.)	47.8	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.036	5
A (72 to 229 °C)	6.9053	5
B	1513.	5
C	207.	5
A* (72 to 198 °C)	1.40029	5
B*	1422.1	5
K		
c		
t_k to t_x °C		
A' (25 to 72 °C)	7.25592	5
B'	1714.5	5
C'	225.	5
A'* (25 to 72 °C)	1.73827	5
B'*	1614.2	5
Ac (229 to t_c °C)	7.7601	5
Bc	2347.	5
Cc	314.	5
Cryos. consts. A° B°		
t_e °C	188.39	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.3714	5
BP	0.05337	5
t_e	0.0375	5
30 mm	0.7432	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.52	5
30 mm	74.56	5
BP	63.33	5
t_e	61.19	5
t_e (d, e)	61.09	5
ΔHv/T_e	18.86	5
d (72 to 188 °C)	82.85	5
e	0.1155	5
d' (25 to 72 °C)	80.63	5
e'	0.0846	5
d_c g/ml	0.225	5
v_c ml/g	4.447	5
t_c °C	339.	5
P_c mm	14482.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9323	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	27.06	5
30	25.67	5
40	24.34	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 127

NAME	4-Ethyl-2, 3-dimethylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH(CH_3)CH(CH_3)CH(C_2H_5)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.	2
100	97.1	4
30	67.7	4
10	45.3	5
1	7.9	5
Pressure mm 25°C	3.1136	5
t_e	1184.	5
Density g/ml 20°C	0.759	2
d_4^t 25	0.755	2
30	0.751	4
a	0.775	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7424	4
MR (Obs.)	47.8	2
MR (Calc.)	48.38	5
(nD-d/2)	1.044	2
Dielectric	2.028	5
A (68 to 227 °C)	6.8988	5
B	1494.	5
C	208.	5
A* (68 to 193 °C)	1.39669	5
B*	1403.7	5
K		
c		
t_k to t_x °C		
A' (25 to 68 °C)	7.25291	5
B'	1695.6	5
C'	226.	5
A'* 25 to	1.73705	5
B'* 68 °C	1595.4	5
Ac (227 to t_c °C)	7.7423	5
Bc	2313.	5
Cc	314.	5
Cryos. A° consts. B°		
t_e °C	182.73	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1760	5
BP	0.05288	5
t_e	0.0374	5
30 mm	0.7358	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.06	5
30 mm	73.54	5
BP	62.56	5
t_e	60.51	5
t_e (d, e)	60.42	5
ΔHv/T_e	18.88	5
d (68 to 183 °C)	81.27	5
e	0.1141	5
d' (25 to 68 °C)	79.12	5
e'	0.0824	5
d_c g/ml	0.236	2
v_c ml/g	4.233	5
t_c °C	336.	5
P_c mm	15139.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9337	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	26.22	5
30	25.13	5
40	24.07	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 128

NAME	3-Ethyl-2,4-dimethylhexane

STRUCTURAL FORMULA

$$CH_3CH(CH_3)\,CH(C_2H_5)\,CH(CH_3)\,CH_2CH_3$$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{10}H_{22}$	142.276

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.	2
100	97.1	4
30	67.7	4
10	45.3	5
1	7.9	5
Pressure mm 25°C	3.1136	5
t_e	1184.	5
Density g/ml 20°C	0.759	2
d_4^t 25	0.755	2
30	0.751	4
a	0.775	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7424	4
MR (Obs.)	47.8	2
MR (Calc.)	48.38	5
(nD-d/2)	1.044	2
Dielectric	2.028	5
A (68 to 227 °C)	6.8988	5
B	1494.	5
C	208.	5
A* (68 to 193 °C)	1.39669	5
B*	1403.7	5
K		
c		
t_k to t_x °C		
A' (25 to 68 °C)	7.25291	5
B'	1695.6	5
C'	226.	5
A'* (25 to 68 °C)	1.73706	5
B'*	1595.4	5
Ac (227 to t_c °C)	7.7423	5
Bc	2313.	5
Cc	314.	5
Cryos. consts. A°		
B°		
t_e °C	182.73	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.1760	5
BP	0.05288	5
t_e	0.0374	5
30 mm	0.7358	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.06	5
30 mm	73.54	5
BP	62.56	5
t_e	60.51	5
t_e (d, e)	60.42	5
$\Delta Hv/T_e$	18.88	5
d (68 to 183 °C)	81.27	5
e	0.1141	5
d' (25 to 68 °C)	79.12	5
e'	0.0824	5
d_c g/ml	0.236	5
v_c ml/g	4.233	5
t_c °C	336.	5
P_c mm	15139.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9337	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	26.22	5
30	25.13	5
40	24.07	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 129

NAME	4-Ethyl-2, 4-dimethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH(CH_3)CH_2C(C_2H_5)(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	158.	2
100	91.9	4
30	62.9	4
10	40.7	5
1	3.8	5
Pressure mm 25°C	4.0755	5
t_e	1168.	5
Density g/ml 20°C	0.747	2
d^t_4 25	0.743	2
30	0.739	4
a	0.763	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.419	2
25	1.417	2
30	1.414	4
"C"	0.7459	4
MR (Obs.)	48.1	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.013	5
A (63 to 212 °C)	6.8907	5
B	1472.	5
C	209.	5
A* (63 to 186 °C)	1.39351	5
B*	1382.1	5
K		
c		
t_k to t_x °C		
A' (25 to 63 °C)	7.24922	5
B'	1672.9	5
C'	227.	5
A'* 25 to	1.73555	5
B'* 63 °C	1572.8	5
Ac (212 to t_c °C)	7.6778	5
Bc	2211.	5
Cc	304.	5
Cryos. A° consts. B°		
t_e °C	175.91	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.0445	5
BP	0.05230	5
t_e	0.0374	5
30 mm	0.7269	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.35	5
30 mm	72.33	5
BP	61.56	5
t_e	59.61	5
t_e (d, e)	59.53	5
$\Delta Hv/T_e$	18.88	5
d (63 to 176 °C)	79.44	5
e	0.1132	5
d' (25 to 63 °C)	77.34	5
e'	0.0797	5
d_c g/ml	0.233	5
v_c ml/g	4.292	5
t_c °C	326.	5
P_c mm	14685.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9347	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.60	5
30	23.56	5
40	22.55	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 130

NAME	3-Ethyl-2,5-dimethylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH(CH_3)CH(C_2H_5)CH_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	157.	2
100	91.0	4
30	62.0	4
10	39.9	5
1	3.1	5
Pressure mm 25°C	4.2614	5
t_e	1165.	5
Density g/ml 20°C	0.741	2
d_4^t 25	0.737	2
30	0.733	4
a	0.757	4
b	-0.038	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7469	4
MR (Obs.)	48.2	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.005	5
A (62 to 210 °C)	6.8894	5
B	1468.	5
C	209.	5
A* (62 to 185 °C)	1.39312	5
B*	1378.6	5
K		
c		
t_k to t_x °C		
A' (25 to 62 °C)	7.24860	5
B'	1669.1	5
C'	227.	5
A'* 25 to	1.73529	5
B'* 62 °C	1569.0	5
Ac (210 to t_c °C)	7.6637	5
Bc	2190.	5
Cc	302.	5
Cryos. consts. A°		
B°		
t_e °C	174.77	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.8827	5
BP	0.05220	5
t_e	0.0374	5
30 mm	0.7254	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.06	5
30 mm	72.13	5
BP	61.39	5
t_e	59.5	5
t_e (d, e)	59.38	5
$\Delta Hv/T_e$	18.88	5
d (62 to 175 °C)	79.14	5
e	0.1131	5
d' (25 to 62 °C)	77.04	5
e'	0.0792	5
d_c g/ml	0.231	5
v_c ml/g	4.328	5
t_c °C	323.	5
P_c mm	14490.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9348	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.82	5
30	22.81	5
40	21.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 131

NAME	4-Ethyl-3, 3-dimethylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	$CH_3CH_2C(CH_3)(CH_3)CH(C_2H_5)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	165.	2
100	98.0	4
30	68.5	4
10	46.1	5
1	8.6	5
Pressure mm 25°C	2.9762	5
t_e	1187.	5
Density g/ml 20°C	0.764	2
d^t_4 25	0.760	2
30	0.756	4
a	0.780	4
b	-0.038	4
Ref. Index n_D 20°C	1.427	2
25	1.425	2
30	1.422	4
"C"	0.7424	4
MR (Obs.)	47.8	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.036	5
A (69 to 228 °C)	6.9001	5
B	1498.	5
C	208.	5
A* (69 to 194 °C)	1.39706	5
B*	1407.3	5
K		
c		
t_k to t_x °C		
A' (25 to 69 °C)	7.25351	5
B'	1699.4	5
C'	226.	5
A'* (25 to 69 °C)	1.73730	5
B'*	1599.1	5
Ac (228 to t_c °C)	7.7571	5
Bc	2336.	5
Cc	316.	5
Cryos. consts. A°		
B°		
t_e °C	183.87	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.3948	5
BP	0.05298	5
t_e	0.0374	5
30 mm	0.7373	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.35	5
30 mm	73.75	5
BP	62.74	5
t_e	60.67	5
t_e (d, e)	60.58	5
ΔHv/T_e	18.89	5
d (69 to 184 °C)	81.57	5
e	0.1142	5
d' (25 to 69 °C)	79.42	5
e'	0.0828	5
d_c g/ml	0.238	5
v_c ml/g	4.200	5
t_c °C	338.	5
P_c mm	15307.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9337	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	26.92	5
30	25.81	5
40	24.73	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 132

NAME	3-Ethyl-3,4-dimethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	C_2H_5 / CH_3CH_2C CH CH_2CH_3 / CH_3 CH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	170.	2
100	102.3	4
30	72.5	4
10	49.8	5
1	12.0	5
Pressure mm 25°C	2.3895	5
t_e	1200.2	5
Density g/ml 20°C	0.772	2
d^t_4 25	0.768	2
30	0.764	4
a	0.788	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.431	2
25	1.429	2
30	1.426	4
"C"	0.7412	4
MR (Obs.)	47.7	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.048	5
A 73 to	6.9015	5
B 235 °C	1515.	5
C	207.	5
A* 73 to	1.39547	5
B* 200 °C	1423.7	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.25114	5
B' 73 °C	1716.1	5
C'	225.	5
A'* 25 to	1.73320	5
B'* 73 °C	1615.9	5
Ac 235 to	7.8101	5
Bc t_c °C	2428.	5
Cc	325.	5
Cryos. consts. A°		
B°		
t_e °C	189.56	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.6033	5
BP	0.05354	5
t_e	0.0375	5
30 mm	0.7452	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.71	5
30 mm	74.67	5
BP	63.45	5
t_e	61.30	5
t_e (d, e)	61.19	5
$\Delta Hv/T_e$	18.85	5
d 73 to	83.03	5
e 190 °C	0.1152	5
d' 25 to	80.84	5
e' 73 °C	0.0850	5
d_c g/ml	0.239	5
v_c ml/g	4.183	5
t_c °C	346.	5
P_c mm	15572.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9322	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.07	5
30	26.92	5
40	25.81	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. 1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_C$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 133

NAME	2, 2, 3, 3-Tetramethylhexane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276	CH_3CH_3 / $CH_3C\ \ C\ \ (CH_2)_2CH_3$ / CH_3CH_3

Property	Value	Ref.
F.P. °C	-54.00	2
F.P. 100%		
B.P. °C 760 mm	160.31	2
100	93.6	4
30	64.4	4
10	42.1	5
1	4.9	5
Pressure mm 25°C	3.7784	5
t_e	1175.	5
Density g/ml 20°C	0.76446	2
d_4^t 25	0.76089	2
30	0.75732	4
a	0.77873	4
b	-0.0_3713	4
Ref. Index n_D 20°C	1.42818	2
25	1.42600	2
30	1.42390	4
"C"	0.7439	4
MR (Obs.)	47.900	5
MR (Calc.)	48.38	5
(nD-d/2)	1.04595	2
Dielectric	2.040	5
A 64 to 225 °C	6.8728	5
B	1472.	5
C	209.	5
A* 64 to 189 °C	1.37326	5
B*	1382.5	5
K		
c		
t_k to t_x °C		
A' 25 to 64 °C	7.22868	5
B'	1673.1	5
C'	227.	5
A'* 25 to 64 °C	1.71446	5
B'*	1573.0	5
Ac 225 to t_c °C	7.7086	5
Bc	2282.	5
Cc	314.	5
Cryos. consts. A° B°		
t_e °C	178.66	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.3468	5
BP	0.05280	5
t_e	0.0376	5
30 mm	0.7322	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.62	5
30 mm	72.45	5
BP	61.65	5
t_e	59.67	5
t_e (d, e)	59.58	5
ΔHv/T_e	18.79	5
d 64 to 179 °C	79.70	5
e	0.1126	5
d' 25 to 64 °C	77.63	5
e'	0.0804	5
d_c g/ml	0.241	5
v_c ml/g	4.150	5
t_c °C	334.	5
P_c mm	15392.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9345	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	26.99	5
γ 30	25.99	5
40	25.02	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 134

NAME	2, 2, 3, 4-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)(CH_3)CH(CH_3)CH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	154.9	2
100	88.9	4
30	59.9	4
10	37.8	5
1	1.1	5
Pressure mm 25°C	4.8247	5
t_e	1157.	5
Density g/ml 20°C	0.7548	2
d^t_4 25	0.7508	2
30	0.7468	4
a	0.771	4
b	-0.038	4
Ref. Index n_D 20°C	1.4226	2
25	1.4202	2
30	1.4178	4
"C"	0.7442	4
MR (Obs.)	47.96	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0452	2
Dielectric	2.024	5
A 60 to 210 °C	6.8621	5
B	1451.	5
C	210.	5
A* 60 to 182 °C	1.37036	5
B*	1362.8	5
K		
c		
t_k to t_x °C		
A' 25 to 60 °C	7.22177	5
B'	1651.4	5
C'	228.	5
A'* 25 to 60 °C	1.70956	5
B'*	1551.4	5
Ac 210 to t_c °C	7.6365	5
Bc	2174.	5
Cc	304.	5
Cryos. consts. A°		
B°		
t_e °C	172.42	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.4772	5
BP	0.05231	5
t_e	0.0377	5
30 mm	0.7244	5
ΔHm cal/g		
ΔHv cal/g 25°C	74.03	5
30 mm	71.31	5
BP	60.57	5
t_e	58.67	5
t_e (d, e)	58.59	5
ΔHv/T_e	18.73	5
d 60 to 172 °C	78.08	5
e	0.1130	5
d' 25 to 60 °C	75.98	5
e'	0.0780	5
d_c g/ml	0.233	5
v_c ml/g	4.293	5
t_c °C	323.	5
P_c mm	14608.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9333	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.65	5
30	24.57	5
40	23.53	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 135

NAME	2, 2, 3, 5-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276

Structural formula: $CH_3C(CH_3)_2CH(CH_3)CH_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	148.4	2
100	83.11	4
30	54.49	4
10	32.73	5
1	-3.54	5
Pressure mm 25°C	6.4707	5
t_e	1138.6	5
Density g/ml 20°C	0.7378	2
d_4^t 25	0.7336	2
30	0.7294	4
a	0.755	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4142	2
25	1.4117	2
30	1.4092	4
"C"	0.7471	4
MR (Obs.)	48.21	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0453	2
Dielectric	2.000	5
A (55 to 199 °C)	6.8462	5
B	1424.4	5
C	211.	5
A* (55 to 175 °C)	1.36082	5
B*	1337.3	5
K		
c		
t_k to t_x °C		
A' (25 to 55 °C)	7.21049	5
B'	1624.23	5
C'	229.	5
A'* 25 to	1.70077	5
B'* 55 °C	1524.4	5
Ac (199 to t_c °C)	7.56018	5
Bc	2064.8	5
Cc	293.8	5
Cryos. consts. A°		
B°		
t_e °C	165.04	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.6618	5
BP	0.05176	5
t_e	0.03783	5
30 mm	0.7153	5
ΔHm cal/g		
ΔHv cal/g 25°C	72.10	5
30 mm	69.89	5
BP	59.34	5
t_e	57.55	5
t_e (d, e)	57.48	5
ΔHv/T_e	18.69	5
d (55 to 165 °C)	76.01	5
e	0.1123	5
d' (25 to 55 °C)	73.98	5
e'	0.0750	5
d_c g/ml	0.225	5
v_c ml/g	4.444	5
t_c °C	310.	5
P_c mm	13805.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9338	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.41	5
30	22.36	5
40	21.34	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 136

NAME	2,2,4,4-Tetramethylhexane
Mole % Pur.	Ref.
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$$CH_3\overset{CH_3}{\underset{CH_3}{C}}\;CH_2\overset{CH_3}{\underset{CH_3}{C}}\;CH_2CH_3$$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	153.3	2
100	87.44	4
30	58.55	4
10	36.58	5
1	-0.06	5
Pressure mm 25°C	5.1912	5
t_e	1152.6	5
Density g/ml 20°C	0.7470	2
d_4^t 25	0.7428	2
30	0.739	4
a	0.7638	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4208	2
25	1.4183	2
30	1.4159	4
"C"	0.7489	4
MR (Obs.)	48.28	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0473	2
Dielectric	2.019	5
A 59 to	6.85770	5
B 206 °C	1444.2	5
C	210.	5
A* 59 to	1.36755	5
B* 181 °C	1356.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.21851	5
B' 59 °C	1644.5	5
C'	228.	5
A'* 25 to	1.70692	5
B'* 59 °C	1544.5	5
Ac 206 to	7.60949	5
Bc t_c °C	2135.9	5
Cc	299.6	5
Cryos. A° consts. B°		
t_e °C	170.60	5

		Ref.
dt/dP °C/mm 25°C	3.2530	5
BP	0.05218	5
t_e	0.0378	5
30 mm	0.7222	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.54	5
30 mm	70.95	5
BP	60.26	5
t_e	58.38	5
t_e (d, e)	58.30	5
ΔHv/T_e	18.72	5
d 59 to	77.56	5
e 171 °C	0.1129	5
d' 25 to	75.47	5
e' 59 °C	0.0772	5
d_c g/ml	0.228	5
v_c ml/g	4.385	5
t_c °C	318.	5
P_c mm	14184.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9334	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.60	5
30	23.51	5
40	22.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	99.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 137

NAME	2,2,4,5-Tetramethylhexane		
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

STRUCTURAL FORMULA

$CH_3C(CH_3)_2CH_2CH(CH_3)CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	147.88	2
100	82.64	4
30	54.05	4
10	32.31	5
1	-3.93	5
Pressure mm 25°C	6.6267	5
t_e	1137.1	5
Density g/ml 20°C	0.73546	2
d^t_4 25	0.73161	2
30	0.7278	4
a	0.7508	4
b	-0.0377	4
Ref. Index n_D 20°C	1.41318	2
25	1.41095	2
30	1.40861	4
"C"	0.7477	4
MR (Obs.)	48.257	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04545	2
Dielectric	1.997	5
A (54 to 199 °C)	6.8445	5
B	1422.1	5
C	211.	5
A* (54 to 175 °C)	1.35962	5
B*	1335.1	5
K		
c		
t_k to t_x °C		
A' (25 to 54 °C)	7.20914	5
B'	1621.9	5
C'	229.	5
A'* 25 to	1.69963	5
B'* 54 °C	1522.1	5
Ac (199 to t_c °C)	7.56096	5
Bc	2065.9	5
Cc	294.6	5
Cryos. consts. A°		
B°		
t_e °C	164.45	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.6050	5
BP	0.05173	5
t_e	0.03784	5
30 mm	0.7146	5
ΔHm cal/g		
ΔHv cal/g 25°C	71.94	5
30 mm	69.77	5
BP	59.25	5
t_e	57.47	5
t_e (d, e)	57.39	5
$\Delta Hv/T_e$	18.68	5
d (54 to 165 °C)	75.83	5
e	0.1121	5
d' (25 to 54 °C)	73.81	5
e'	0.0748	5
d_c g/ml	0.228	5
v_c ml/g	4.391	5
t_c °C	310.	5
P_c mm	13973.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9339	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.12	5
30	22.16	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	99.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 138

NAME	2,2,5,5-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)_2(CH_2)_2C(CH_3)_2CH_3$

Property	Value	Ref.
F.P. °C	-12.60	2
F.P. 100%		
B.P. °C 760 mm	137.46	2
100	73.43	4
30	45.41	4
10	24.12	5
1	-11.33	5
Pressure mm 25°C	10.5003	5
t_e	1113.0	5
Density g/ml 20°C	0.71875	2
d_4^t 25	0.71480	2
30	0.7108	4
a	0.7345	4
b	-0.0_379	4
Ref. Index n_D 20°C	1.40550	2
25	1.40316	2
30	1.40078	4
"C"	0.7517	4
MR (Obs.)	48.570	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04612	2
Dielectric	1.975	5
A (45 to 180 °C)	6.81977	5
B	1380.0	5
C	213.	5
A* (45 to 163 °C)	1.33826	5
B*	1293.1	5
K		
c		
t_k / t_x (to °C)		
A' (25 to 45 °C)	7.19208	5
B'	1579.0	5
C'	231.	5
A'* 25 to	1.68745	5
B'* 45 °C	1479.7	5
Ac (180 to t_c °C)	7.46624	5
Bc	1931.3	5
Cc	284.4	5
Cryos. consts. A° / B°		
t_e °C	152.84	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.7150	5
BP	0.05083	5
t_e	0.03782	5
30 mm	0.6999	5
ΔHm cal/g		
ΔHv cal/g 25°C	68.95	5
30 mm	67.53	5
BP	57.58	5
t_e	55.96	5
t_e (d, e)	55.92	5
$ΔHv/T_e$	18.68	5
d (45 to 153 °C)	72.44	5
e	0.1081	5
d' (25 to 45 °C)	70.71	5
e'	0.0701	5
d_c g/ml	0.222	5
v_c ml/g	4.504	5
t_c °C	293.	5
P_c mm	13225.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9389	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.08	5
30	20.17	5
40	19.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 139

NAME	2,3,3,4-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH\,C(CH_3)(CH_3)\,CH(CH_3)\,CH_2CH_3$ with CH_3 on C-2

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	164.59	2
100	97.44	4
30	67.92	4
10	45.45	5
1	7.97	5
Pressure mm 25°C	3.0990	5
t_e	1186.1	5
Density g/ml 20°C	0.7694	2
d^t_4 25	0.7648	2
30	0.7602	4
a	0.7878	4
b	-0.0₃92	4
Ref. Index n_D 20°C	1.4297	2
25	1.4269	2
30	1.4242	4
"C"	0.7416	4
MR (Obs.)	47.74	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0450	2
Dielectric	1.901	5
A (68 to 226 °C)	6.88337	5
B	1490.2	5
C	208.	5
A* (68 to 193 °C)	1.38067	5
B*	1399.8	5
K		
c		
t_k to t_x °C		
A' (25 to 68 °C)	7.2364	5
B'	1691.2	5
C'	226.	5
A'* 25 to	1.72056	5
B'* 68 °C	1591.0	5
Ac (226 to t_c °C)	7.7251	5
Bc	2307.0	5
Cc	313.3	5
Cryos. consts. A°		
B°		
t_e °C	183.49	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.2091	5
BP	0.05316	5
t_e	0.03760	5
30 mm	0.7381	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.93	5
30 mm	73.40	5
BP	62.41	5
t_e	60.34	5
t_e (d, e)	60.25	5
$\Delta Hv/T_e$	18.80	5
d (68 to 183 °C)	81.12	5
e	0.1137	5
d' (25 to °C)	78.99	5
e'	0.0824	5
d_c g/ml	0.231	5
v_c ml/g	4.334	5
t_c °C	336.	5
P_c mm	14785.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9336	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	27.69	5
30	26.39	5
40	25.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 140

NAME	2,3,3,5-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)C(CH_3)(CH_3)CH_2CH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	153.	2
100	87.19	4
30	58.31	4
10	36.35	5
1	-0.26	5
Pressure mm 25°C	5.2585	5
t_e	1151.7	5
Density g/ml 20°C	0.746	2
d_4^t 25	0.742	2
30	0.738	4
a	0.762	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.4196	2
25	1.4172	2
30	1.4148	4
"C"	0.7479	4
MR (Obs.)	48.223	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0466	2
Dielectric	2.015	5
A (58 to 206 °C)	6.85754	5
B	1443.3	5
C	210.	5
A* (58 to 180 °C)	1.36768	5
B*	1355.4	5
K		
c		
t_k / t_x to °C		
A' (25 to 58 °C)	7.21858	5
B'	1643.5	5
C'	228.	5
A'* 25 to	1.70709	5
B'* 58 °C	1543.5	5
Ac (206 to t_c °C)	7.61131	5
Bc	2137.7	5
Cc	300.1	5
Cryos. consts. A°		
B°		
t_e °C	170.26	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.2148	5
BP	0.05215	5
t_e	0.03777	5
30 mm	0.7217	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.46	5
30 mm	70.89	5
BP	60.21	5
t_e	58.34	5
t_e (d,e)	58.26	5
ΔHv/T_e	18.72	5
d (58 to 170 °C)	77.47	5
e	0.1128	5
d' (25 to 58 °C)	75.39	5
e'	0.0771	5
d_c g/ml	0.230	5
v_c ml/g	4.347	5
t_c °C	318.	5
P_c mm	14305.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9334	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	24.47	5
30	23.43	5
40	22.43	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.81\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 141

NAME	2, 3, 4, 4-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH(CH_3)CH(CH_3)C(CH_3)_2CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	162.2	2
100	95.38	4
30	66.01	4
10	43.66	5
1	6.38	5
Pressure mm 25°C	3.4403	5
t_e	1179.4	5
Density g/ml 20°C	0.7639	2
d^t_4 25	0.7596	2
30	0.7553	4
a	0.7811	4
b	-0.0_386	4
Ref. Index n_D 20°C	1.4270	2
25	1.4244	2
30	1.4218	4
"C"	0.7425	4
MR (Obs.)	47.82	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0451	2
Dielectric	2.036	5
A 66 to 224 °C	6.88230	5
B	1482.1	5
C	208.	5
A* 66 to 191 °C	1.38187	5
B*	1392.1	5
K		
c		
t_k to t_x °C		
A' 25 to 66 °C	7.23713	5
B'	1683.1	5
C'	226.	5
A'* 25 to	1.72212	5
B'* 66 °C	1582.9	5
Ac 224 to t_c °C	7.70922	5
Bc	2278.0	5
Cc	311.2	5
Cryos. A° consts. B°		
t_e °C	180.75	5

		Ref.
dt/dP °C/mm 25°C	4.7322	5
BP	0.05290	5
t_e	0.03758	5
30 mm	0.7344	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.29	5
30 mm	72.95	5
BP	62.03	5
t_e	60.01	5
t_e (d, e)	59.93	5
ΔHv/T_e	18.81	5
d 66 to 181 °C	80.44	5
e	0.1135	5
d' 25 to 66 °C	78.31	5
e'	0.0814	5
d_c g/ml	0.233	5
v_c ml/g	4.290	5
t_c °C	333.	5
P_c mm	14863.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9338	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	26.91	5
30	25.71	5
40	24.56	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. 1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82 T_c$ — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 142

NAME	2, 3, 4, 5-Tetramethylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	
Molecular Formula	$C_{10}H_{22}$	
Molecular Weight	142.276	$CH_3CH(CH_3)CH(CH_3)CH(CH_3)CH(CH_3)CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	161.	2
100	94.20	4
30	64.87	4
10	42.55	5
1	5.33	5
Pressure mm 25°C	3.6754	5
t_e	1176.1	5
Density g/ml 20°C	0.757	2
d^t_4 25	0.753	2
30	0.749	4
a	0.077	4
b	$-0.0_{3}8$	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7444	4
MR (Obs.)	47.959	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.028	5
A 65 to 222 °C	6.87132	5
B	1474.1	5
C	208.	5
A* 65 to 190 °C	1.3720	5
B*	1384.4	5
K		
c		
t_k to °C		
t_x		
A' 25 to 65 °C	7.22662	5
B'	1674.7	5
C'	226.	5
A'* 25 to	1.71217	5
B'* 65 °C	1574.6	5
Ac 222 to t_c °C	7.69175	5
Bc	2261.0	5
Cc	310.6	5
Cryos. consts. A°		
B°		
t_e °C	179.43	5

		Ref.
dt/dP °C/mm 25°C	4.4596	5
BP	0.05290	5
t_e	0.03768	5
30 mm	0.7334	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.77	5
30 mm	72.55	5
BP	61.69	5
t_e	59.69	5
t_e (d, e)	59.60	5
$\Delta Hv/T_e$	18.76	5
d 65 to 180 °C	79.89	5
e	0.1131	5
d' 25 to 65 °C	77.79	5
e'	0.0807	5
d_c g/ml	0.233	5
v_c ml/g	4.294	5
t_c °C	331.	5
P_c mm	14801.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9339	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^V to °C		
A^V		
(B^V) to °C		
(A^V)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.95	5
30	24.87	5
40	23.81	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 143

NAME	3, 3, 4, 4-Tetramethylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

STRUCTURAL FORMULA: $CH_3CH_2C(CH_3)_2C(CH_3)_2CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	170.0	2
100	102.23	4
30	72.43	4
10	49.73	5
1	11.85	5
Pressure mm 25°C	2.4070	5
t_e	1200.2	5
Density g/ml 20°C	0.7824	2
d_4^t 25	0.7783	2
30	0.7742	4
a	0.7988	4
b	-0.0382	4
Ref. Index n_D 20°C	1.4368	2
25	1.4344	2
30	1.4319	4
"C"	0.7406	4
MR (Obs.)	47.622	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0456	2
Dielectric	2.064	5
A 72 to	6.89630	5
B 236 °C	1512.6	5
C	207.	5
A* 72 to	1.39029	5
B* 200 °C	1421.7	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.24577	5
B' 72 °C	1714.0	5
C'	225.	5
A'* 25 to	1.72790	5
B'* 72 °C	1613.7	5
Ac 236 to	7.81479	5
Bc t_c °C	2440.5	5
Cc	326.9	5
Cryos. A°		
consts. B°		
t_e °C	189.58	5

		Ref.
dt/dP °C/mm 25°C	6.5635	5
BP	0.05361	5
t_e	0.03757	5
30 mm	0.7456	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.61	5
30 mm	74.59	5
BP	63.37	5
t_e	61.23	5
t_e (d, e)	61.12	5
$\Delta Hv/T_e$	18.82	5
d 72 to	82.91	5
e 190 °C	0.1150	5
d' 25 to	80.74	5
e' 72 °C	0.0849	5
d_c g/ml	0.241	5
v_c ml/g	4.150	5
t_c °C	348.	5
P_c mm	15745.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9322	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B_v^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	29.61	5
γ 30	28.39	5
40	27.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 144

NAME	3-Isopropyl-2,4-dimethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3CH\,CH(C_3H_7)\,CH\,CH_3$ with CH_3 on each CH

Property	Value	Ref.
F.P. °C	-81.70	2
F.P. 100%		
B.P. °C 760 mm	157.04	2
100	91.08	4
30	62.08	4
10	40.00	5
1	3.151	5
Pressure mm 25°C	4.2478	5
t_e	1165.2	5
Density g/ml 20°C	0.75830	2
d^t_4 25	0.75457	2
30	0.7508	4
a	0.7732	4
b	-0.0₃74	4
Ref. Index n_D 20°C	1.42463	2
25	1.42248	2
30	1.42017	4
"C"	0.7441	4
MR (Obs.)	47.939	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04548	2
Dielectric	2.029	5
A 62 to 213 °C	6.89055	5
B	1468.4	5
C	209.	5
A* 62 to 185 °C	1.3942	5
B*	1379.1	5
K		
c		
t_k to t_x °C		
A' 25 to 62 °C	7.2498	5
B'	1669.7	5
C'	227.	5
A'* 25 to	1.7364	5
B'* 62 °C	1569.6	5
Ac 213 to t_c °C	7.68916	5
Bc	2224.8	5
Cc	307.2	5
Cryos. consts. A°		
B°		
t_e °C	174.81	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.8935	5
BP	0.05219	5
t_e	0.03742	5
30 mm	0.7254	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.09	5
30 mm	72.15	5
BP	61.42	5
t_e	59.50	5
t_e (d, e)	59.42	5
ΔHv/T_e	18.90	5
d 62 to 175 °C	79.17	5
e	0.1130	5
d' 25 to 62 °C	77.08	5
e'	0.0793	5
d_c g/ml	0.241	5
v_c ml/g	4.145	5
t_c °C	327.	5
P_c mm	15233.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9348	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	26.13	5
30	25.11	5
40	24.12	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 145

NAME	3, 3-Diethyl-2-methylpentane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: $CH_3CH(CH_3)C(C_2H_5)_2CH_2CH_3$ (printed as C_2H_5 above C; CH_3CH C CH_2CH_3; CH_3 C_2H_5 below)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	174.	2
100	105.87	4
30	75.87	4
10	53.01	5
1	14.86	5
Pressure mm 25°C	1.9757	5
t_e	1211.6	5
Density g/ml 20°C	0.780	2
d_4^t 25	0.775	2
30	0.770	4
a	0.800	4
b	-0.001	4
Ref. Index n_D 20°C	1.435	2
25	1.432	2
30	1.429	4
"C"	0.7400	4
MR (Obs.)	47.597	2
MR (Calc.)	48.38	5
(nD-d/2)	1.045	2
Dielectric	2.059	5
A (76 to 236 °C)	6.9118	5
B	1531.5	5
C	206.	5
A* (76 to 204 °C)	1.40206	5
B*	1439.9	5
K		
c		
t_k to t_x °C		
A' (25 to 76 °C)	7.2589	5
B'	1733.4	5
C'	224.	5
A'* 25 to	1.7394	5
B'* 76 °C	1633.1	5
Ac (236 to t_c °C)	7.8257	5
Bc	2451.7	5
Cc	323.8	5
Cryos. consts. A°		
B°		
t_e °C	194.10	5

Property	Value	Ref.
dt/dP °C/mm 25°C	7.8588	5
BP	0.05386	5
t_e	0.03746	5
30 mm	0.7507	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.99	5
30 mm	75.57	5
BP	64.20	5
t_e	61.97	5
t_e (d, e)	61.87	5
ΔHv/T_e	18.87	5
d (76 to 194 °C)	84.36	5
e	0.1159	5
d' (25 to 76 °C)	82.16	5
e'	0.0869	5
d_c g/ml	0.229	5
v_c ml/g	4.361	5
t_c °C	348.	5
P_c mm	14985.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9319	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.25	5
30	27.78	5
40	26.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 146

NAME	3-Ethyl-2, 2, 3-trimethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)(CH_3)C(C_2H_5)(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	168.	2
100	100.45	4
30	70.75	4
10	48.14	5
1	10.41	5
Pressure mm 25°C	2.6452	5
t_e	1196.0	5
Density g/ml 20°C	0.781	2
d^t_4 25	0.777	2
30	0.773	4
a	0.7970	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.436	2
25	1.434	2
30	1.431	4
"C"	0.7407	4
MR (Obs.)	47.63	2
MR (Calc.)	48.38	5
(nD-d/2)	1.046	2
Dielectric	2.062	5
A 71 to 234 °C	6.8911	5
B	1504.2	5
C	207.	5
A* 71 to 197 °C	1.38518	5
B*	1413.1	5
K		
c		
t_k to t_x °C		
A' 25 to 71 °C	7.2419	5
B'	1705.4	5
C'	225.	5
A'* 25 to 71 °C	1.72474	5
B'*	1605.2	5
Ac 234 to t_c °C	7.79459	5
Bc	2410.3	5
Cc	324.7	5
Cryos. consts. A°		
B°		
t_e °C	187.37	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.0208	5
BP	0.05345	5
t_e	0.03756	5
30 mm	0.7429	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.98	5
30 mm	74.14	5
BP	63.06	5
t_e	60.95	5
t_e (d, e)	60.84	5
$\Delta Hv/T_e$	18.83	5
d 71 to 187 °C	82.20	5
e	0.1140	5
d' 25 to 71 °C	80.08	5
e'	0.0840	5
d_c g/ml	0.242	5
v_c ml/g	4.131	5
t_c °C	345.	5
P_c mm	15744.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9334	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.40	5
30	28.21	5
40	27.06	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\,T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 147

NAME	3-Ethyl-2, 2, 4-trimethylpentane
Mole % Pur.	Ref.
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3C(CH_3)_2$ – $CH(C_2H_5)$ – $CH(CH_3)CH_3$

(printed as: CH_3 above C; CH_3C CH CH CH_3; CH_3 and C_2H_5 below)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	155.3	2
100	89.23	4
30	60.23	4
10	38.17	5
1	1.39	5
Pressure mm 25°C	4.7370	5
t_e	1160.4	5
Density g/ml 20°C	0.7571	2
d_4^t 25	0.7531	2
30	0.7491	4
a	0.7731	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4223	2
25	1.4199	2
30	1.4175	4
"C"	0.7414	4
MR (Obs.)	47.78	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0438	2
Dielectric	2.023	5
A 60 to 211 °C	6.8631	5
B	1452.7	5
C	209.	5
A* 60 to 183 °C	1.3684	5
B*	1363.7	5
K		
c		
t_k to t_x °C		
A' 25 to 60 °C	7.2226	5
B'	1653.1	5
C'	227.	5
A'* 25 to 60 °C	1.71021	5
B'*	1553.1	5
Ac 211 to t_c °C	7.64307	5
Bc	2183.2	5
Cc	304.6	5
Cryos. consts. A°		
B°		
t_e °C	172.95	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.5358	5
BP	0.05235	5
t_e	0.03680	5
30 mm	0.7250	5
ΔHm cal/g		
ΔHv cal/g 25°C	74.15	5
30 mm	71.40	5
BP	60.74	5
t_e	58.84	5
t_e (d, e)	58.76	5
$\Delta Hv/T_e$	18.76	5
d 60 to 173 °C	78.15	5
e	0.1121	5
d' 25 to 60 °C	76.10	5
e'	0.0782	5
d_c g/ml	0.234	5
v_c ml/g	4.272	5
t_c °C	324.	5
P_c mm	14706.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9349	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.96	5
30	24.88	5
40	23.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.81 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 148

NAME	3-Ethyl-2,3,4-trimethylpentane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{22}$	Molecular Weight 142.276

Structural formula: C_2H_5 / $CH_3CH\ C\ CHCH_3$ / $CH_3CH_3CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	169.44	2
100	101.72	4
30	71.94	4
10	49.26	5
1	11.43	5
Pressure mm 25°C	2.4751	5
t_e	1198.6	5
Density g/ml 20°C	0.7773	2
d^t_4 25	0.7733	2
30	0.7693	4
a	0.7933	4
b	-0.0380	4
Ref. Index n_D 20°C	1.4333	2
25	1.4310	2
30	1.4285	4
"C"	0.7399	4
MR (Obs.)	47.60	2
MR (Calc.)	48.38	5
(nD-d/2)	1.0447	2
Dielectric	2.054	5
A 72 to	6.8938	5
B 235 °C	1509.9	5
C	207.	5
A* 72 to	1.38832	5
B* 199 °C	1419.1	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.24360	5
B' 72 °C	1711.2	5
C'	225.	5
A'* 25 to	1.72596	5
B'* 72 °C	1610.9	5
Ac 235 to	7.80480	5
Bc t_c °C	2426.8	5
Cc	325.7	5
Cryos. A° consts. B°		
t_e °C	188.95	5

		Ref.
dt/dP °C/mm 25°C	6.3989	5
BP	0.05358	5
t_e	0.03759	5
30 mm	0.7450	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.42	5
30 mm	74.45	5
BP	63.25	5
t_e	61.11	5
t_e (d, e)	61.00	5
$ΔHv/T_e$	18.81	5
d 72 to	82.71	5
e 189 °C	0.1149	5
d' 25 to	80.53	5
e' 72 °C	0.0846	5
d_c g/ml	0.240	5
v_c ml/g	4.168	5
t_c °C	347.	5
P_c mm	15653.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9322	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	28.85	5
γ 30	27.67	5
40	26.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 149

NAME	2,2,3,3,4-Pentamethylpentane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{22}$ / Molecular Weight 142.276	$CH_3C(CH_3)_2C(CH_3)_2CH(CH_3)CH_3$ (CH3CH3 / CH3C C CH CH3 / CH3CH3CH3)

Property	Value	Ref.
F.P. °C	-36.45	2
F.P. 100%		
B.P. °C 760 mm	166.05	2
100	98.72	4
30	69.13	4
10	46.60	5
1	9.01	5
Pressure mm 25°C	2.8978	5
t_e	1190.4	5
Density g/ml 20°C	0.78009	2
d_4^t 25	0.77675	2
30	0.7734	4
a	0.7934	4
b	-0.0₃67	4
Ref. Index n_D 20°C	1.43606	2
25	1.43412	2
30	1.43210	4
"C"	0.7417	4
MR (Obs.)	47.693	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04602	2
Dielectric	2.062	5
A 69 to 235 °C	6.8863	5
B	1496.1	5
C	207.	5
A* 69 to 195 °C	1.38223	5
B*	1405.4	5
K		
c		
t_k to t_x °C		
A' 25 to 69 °C	7.2383	5
B'	1697.1	5
C'	225.	5
A'* 25 to 69 °C	1.72197	5
B'*	1596.9	5
Ac 235 to t_c °C	7.79495	5
Bc	2410.3	5
Cc	326.8	5
Cryos. consts. A°		
B°		
t_e °C	185.15	5

Property	Value	Ref.
dt/dP °C/mm 25°C	5.5392	5
BP	0.05328	5
t_e	0.03759	5
30 mm	0.7402	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.37	5
30 mm	73.71	5
BP	62.70	5
t_e	60.63	5
t_e (d, e)	60.52	5
$\Delta Hv/T_e$	18.82	5
d 69 to 185 °C	81.56	5
e	0.1136	5
d' 25 to 69 °C	79.45	5
e'	0.0831	5
d_c g/ml	0.249	5
v_c ml/g	4.012	5
t_c °C	346.	5
P_c mm	16236.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9335	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.26	5
30	28.27	5
40	27.30	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L.1.%/wt. u.		
Dispersion	97.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 150

NAME	2,2,3,4,4-Pentamethylpentane
Mole % Pur.	
Ref.	
Molecular Formula	$C_{10}H_{22}$
Molecular Weight	142.276

STRUCTURAL FORMULA

$CH_3C(CH_3)_2$–$CH(CH_3)$–$C(CH_3)_2CH_3$

(printed as: CH_3 CH_3 / CH_3C CH C CH_3 / $CH_3CH_3CH_3$)

Property	Value	Ref.
F.P. °C	-38.75	2
F.P. 100%		
B.P. °C 760 mm	159.29	2
100	92.74	4
30	63.52	4
10	41.28	5
1	4.20	5
Pressure mm 25°C	3.9551	5
t_e	1170.4	5
Density g/ml 20°C	0.76703	2
d^t_4 25	0.76361	2
30	0.7602	4
a	0.7807	4
b	-0.0368	4
Ref. Index n_D 20°C	1.43069	2
25	1.42868	2
30	1.42660	4
"C"	0.7455	4
MR (Obs.)	47.984	2
MR (Calc.)	48.38	5
(nD-d/2)	1.04717	2
Dielectric	2.047	5
A (64 to 224 °C)	6.8712	5
B	1468.6	5
C	209.	5
A* (64 to 188 °C)	1.37443	5
B*	1379.3	5
K		
c		
t_k to t_x °C		
A' (25 to 64 °C)	7.22785	5
B'	1669.2	5
C'	227.	5
A'* (25 to 64 °C)	1.71400	5
B'*	1569.1	5
Ac (224 to t_c °C)	7.70538	5
Bc	2275.4	5
Cc	314.2	5
Cryos. consts. A°		
B°		
t_e °C	177.44	5

Property	Value	Ref.
dt/dP °C/mm 25°C	4.1689	5
BP	0.05270	5
t_e	0.03768	5
30 mm	0.7307	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.32	5
30 mm	72.24	5
BP	61.41	5
t_e	59.45	5
t_e (d, e)	59.36	5
$\Delta Hv/T_e$	18.77	5
d (64 to 178 °C)	79.43	5
e	0.1131	5
d' (25 to 64 °C)	77.32	5
e'	0.0800	5
d_c g/ml	0.244	5
v_c ml/g	4.102	5
t_c °C	333.	5
P_c mm	15544.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9335	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	27.35	5
30	26.38	5
40	25.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	424.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.82 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 151

NAME	n-Undecane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{11}H_{24}$ / Molecular Weight 156.292	$CH_3(CH_2)_9CH_3$

Property	Value	Ref.
F.P. °C	-25.594	2
F.P. 100%		
B.P. °C 760 mm	195.890	2
100	127.943	2
30	97.90	4
10	74.97	4
1	36.60	5
Pressure mm 25°C	0.4289	5
t_e	1244.8	5
Density g/ml 20°C	0.74017	2
d_4^t 25	0.73655	2
30	0.7329	4
a	0.75465	4
b	-0.0_3724	4
Ref. Index n_D 20°C	1.41716	2
25	1.41500	2
30	1.41284	4
"C"	0.7497	4
MR (Obs.)	53.12	2
MR (Calc.)	52.998	5
(nD-d/2)	1.04707	2
Dielectric	2.01	5
A 98 to 258 °C	6.97674	2
B	1572.477	2
C	188.022	2
A* 98 to 227 °C	1.53000	5
B*	1493.5	5
K		
c		
t_k to t_x °C		
A' 25 to 98 °C	7.3225	5
B'	1776.4	5
C'	206.	5
A'* 25 to	1.8511	5
B'* 98 °C	1685.0	5
Ac 258 to t_c °C	7.9352	5
Bc	2543.8	5
Cc	309.3	5
Cryos. consts. A°		
B°		
t_e °C	217.09	5

Property	Value	Ref.
dt/dP °C/mm 25°C	30.42	5
BP	0.05356	5
t_e	0.03641	5
30 mm	0.7526	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.4	2
30 mm	77.55	5
BP	63.5	2
t_e	60.81	5
t_e (d, e)	60.46	5
$\Delta Hv/T_e$	19.38	5
d 98 to 217 °C	91.59	5
e	0.1434	5
d' 25 to 98 °C	89.44	5
e'	0.1214	5
d_c g/ml	0.237	2
v_c ml/g	4.223	2
t_c °C	367.	2
P_c mm	14592.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9305	5
t_e	0.9126	5
t_c	0.242	2
ΔHc kcal/m	1663.55	2
ΔHf		
ΔFf		
Viscosity centistokes η 110 °C	0.5977	2
130	0.5160	2
150	0.4522	2
170	0.4006	2
B^v 100 to 180 °C	491.2	4
A^v	2.49440	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0255	4
n	0.0014	4
o	-0.0_647	4
m' 700 to 1000 °K	0.1104	4
n'	0.0012	4
o'	-0.0_640	4
Surface tension dynes/cm. γ 20°C	24.74	2
30	23.80	2
40	22.88	2
Parachor [P] 20°C	471.0	4
30	471.0	4
40	471.0	4
Sugd.	463.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.83 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 152

NAME	n-Dodecane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{10}CH_3$
Mole % Pur.		
Ref.		
Molecular Formula	$C_{12}H_{26}$	
Molecular Weight	170.328	

		Ref.
F.P. °C	-9.587	2
F.P. 100%		
B.P. °C		
760 mm	216.278	2
100	146.142	2
30	115.1	4
10	91.45	5
1	51.84	5
Pressure mm 25°C	0.1320	5
t_e	1297.3	5
Density g/ml 20°C	0.74869	2
d^t_4 25	0.74516	2
30	0.74163	4
a	0.76281	4
b	-0.0_3706	4
Ref. Index n_D 20°C	1.42160	2
25	1.41949	2
30	1.41735	4
"C"	0.7486	4
MR (Obs.)	57.76	5
MR (Calc.)	57.616	2
(nD-d/2)	1.04725	5
Dielectric	2.02	5
A 150 to	6.98059	2
B 280°C	1625.928	2
C	180.311	2
A* 150 to	1.5604	5
B* 250°C	1546.9	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.3157	5
B' 150°C	1830.0	5
C'	198.3	5
A'* 25 to	1.8787	5
B'* 150°C	1740.9	5
Ac 280 to	8.06653	5
Bc t_c °C	2780.0	5
Cc	322.0	5
Cryos. A° consts. B°		
t_e °C	240.09	5

		Ref.
dt/dP °C/mm		
25°C	89.64	5
BP	0.05528	2
t_e	0.03639	5
30 mm	0.7771	5
ΔHm cal/g	51.69	3'
ΔHv cal/g		
25°C	86.0	2
30 mm	75.46	5
BP	61.3	2
t_e	58.38	5
t_e (d, e)	57.97	5
$\Delta Hv/T_e$	19.37	5
d 150 to	91.58	5
e 230 °C	0.1400	5
d' 25 to	88.92	5
e' 150 °C	0.1170	5
d_c g/ml	0.237	2
v_c ml/g	4.215	2
t_c °C	386.	2
P_c mm	13604.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9283	5
t_e	0.9084	5
t_c	0.237	2
ΔHc kcal/m	1810.48	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 150 °C	0.5128	2
170	0.4516	2
190	0.4017	2
210	0.3597	2
B^v 140 to	529.0	4
A^v 220 °C	$\bar{2}.46116$	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0234	4
n	600 °K	0.0013	4
o		-0.0_643	4
m'	700 to	0.1115	4
n'	1000 °K	0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm. γ 20°C		25.44	2
30		24.51	2
40		23.60	2
Parachor [P] 20°C		510.9	4
30		511.1	4
40		511.1	4
Sugd.		502.2	5
Exp. L.1.%/wt. u. Dispersion			
Flash Point °C		165.	3
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.84\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NFPA 325; 3' JACS 76, 333 (1954) Linke et al.

No. 153

NAME	n-Tridecane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{13}H_{28}$ / Molecular Weight 184.354	$CH_3(CH_2)_{11}CH_3$

Property	Value	Ref.
F.P. °C	-5.392	2
F.P. 100%		
B.P. °C 760 mm	235.44	2
100	163.3	2
30	131.45	4
10	107.09	5
1	66.35	5
Pressure mm 25°C	0.03972	5
t_e	1339.0	5
Density g/ml 20°C	0.7564	2
d_4^t 25	0.7528	2
30	0.7492	2
a	0.7708	4
b	-0.0_372	4
Ref. Index n_D 20°C	1.4256	2
25	1.4234	2
30	1.4213	4
"C"	0.7476	4
MR (Obs.)	62.40	5
MR (Calc.)	62.234	2
(nD-d/2)	1.0474	5
Dielectric	2.03	5
A 131 to 302 °C	6.9887	2
B	1677.43	2
C	172.90	2
A* 131 to 271 °C	1.6005	5
B*	1600.8	5
K		
c		
t_k to t_x °C		
A' 25 to 131 °C	7.3147	5
B'	1881.7	5
C'	190.9	5
A'* 25 to 131 °C	1.9095	5
B'*	1795.0	5
Ac 302 to t_c °C	8.1985	5
Bc	3013.2	5
Cc	333.4	5
Cryos. consts. A°		
B°		
t_e °C	261.5	5

Property	Value	Ref.
dt/dP °C/mm 25°C	249.27	5
BP	0.0568	2
t_e	0.03648	5
30 mm	0.7994	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.9	2
30 mm	73.60	5
BP	59.1	2
t_e	55.97	5
t_e (d, e)	55.47	5
$\Delta Hv/T_e$	19.30	5
d 131 to 261 °C	91.92	5
e	0.1394	5
d' 25 to 131 °C	88.78	5
e'	0.1153	5
d_c g/ml	0.24	2
v_c ml/g	4.231	2
t_c °C	404.	2
P_c mm	12920.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.92225	5
t_e	0.9001	5
t_c	0.23	2
ΔHc kcal/m	1957.40	2
ΔHf		
ΔFf		
Viscosity centistokes η 170 °C	0.5043	2
190	0.4468	2
210	0.3987	2
230	0.3577	2
B^v 160 to 240 °C	558.8	4
A^v	$\bar{2}$.44372	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0241	4
n	0.0014	4
o	-0.0_648	4
m' 700 to 1000 °K	0.1133	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	26.1	2
30	25.2	2
40	24.3	2
Parachor [P] 20°C	550.9	4
30	551.3	4
40	551.6	4
Sugd.	541.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 154

NAME	n-Tetradecane			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{30}$	Molecular Weight 198.380	$CH_3(CH_2)_{12}CH_3$

		Ref.
F.P. °C	5.863	2
F.P. 100%		
B.P. °C 760 mm	253.57	2
100	179.6	2
30	146.91	4
10	121.92	5
1	80.13	5
Pressure mm 25°C	0.01172	5
t_e	1390.0	5
Density g/ml 20°C	0.7628	2
d_4^t 25	0.7593	2
30	0.7558	4
a	0.7768	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4289	2
25	1.4268	2
30	1.4247	4
"C"	0.7467	4
MR (Obs.)	67.03	5
MR (Calc.)	66.852	2
(nD-d/2)	1.0475	5
Dielectric	2.04	5
A (147 to 325 °C)	6.9957	2
B	1725.46	2
C	165.75	2
A* (147 to 292 °C)	1.6252	5
B*	1647.4	5
K		
c		
t_k to		
t_x °C		
A' (25 to 147 °C)	7.3143	5
B'	1930.4	5
C'	183.8	5
A'* 25 to	1.9386	5
B'* 147 °C	1846.1	5
Ac (325 to t_c °C)	8.36982	5
Bc	3312.8	5
Cc	352.5	5
Cryos. consts. A°		
B°		
t_e °C	282.11	5

		Ref.
dt/dP °C/mm 25°C	711.4	5
BP	0.0582	2
t_e	0.03632	5
30 mm	0.8202	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.7	2
30 mm	71.85	5
BP	57.5	2
t_e	54.19	5
t_e (d, e)	53.66	5
ΔHv/T_e	19.36	5
d (147 to 282 °C)	91.62	5
e	0.1346	5
d' (25 to 147 °C)	88.94	5
e'	0.1298	5
d_c g/ml	0.24	2
v_c ml/g	4.184	2
t_c °C	422.	2
P_c mm	12160.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9232	5
t_e	0.8996	5
t_c	0.23	2
ΔHc kcal/m	2104.32	2
ΔHf		
ΔFf		
Viscosity centistokes η 190 °C	0.4946	2
210	0.4402	2
230	0.3941	2
250	0.3552	2
B^v (180 to 260 °C)	588.9	4
A^v	$\bar{2}.42490$	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to 600 °K	0.0242	4
n		0.0014	4
o		-0.0_648	4
m'	700 to 1000 °K	0.1121	4
n'		0.0012	4
o'		-0.0_640	4
Surface tension dynes/cm. γ	20°C	26.6	2
	30	25.7	2
	40	24.8	2
Parachor [P]	20°C	590.6	4
	30	590.9	4
	40	591.2	4
	Sugd.	580.2	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.86 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 155

NAME	n-Pentadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3(CH_2)_{13}CH_3$
Molecular Formula	$C_{15}H_{32}$	
Molecular Weight	212.406	

Property	Value	Ref.
F.P. °C	9.926	2
F.P. 100%		
B.P. °C 760 mm	270.63	2
100	195.0	2
30	161.57	4
10	136.01	5
1	93.26	5
Pressure mm 25°C	0.00233	5
t_e	1424.1	5
Density g/ml 20°C	0.7685	2
d^t_4 25	0.7650	2
30	0.7615	4
a	0.7825	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4319	2
25	1.4298	2
30	1.4277	4
"C"	0.7461	4
MR (Obs.)	71.67	5
MR (Calc.)	71.47	2
(nD-d/2)	1.0476	5
Dielectric	2.05	5
A 160 to 338 °C	7.0017	2
B	1768.82	2
C	158.60	2
A* 160 to 310 °C	1.6613	5
B*	1693.8	5
K		
c		
t_k to t_x °C		
A' 25 to 160 °C	7.3123	5
B'	1973.3	5
C'	176.6	5
A'* 25 to 160 °C	1.9646	5
B'*	1891.6	5
Ac 338 to t_c °C	8.5317	5
Bc	3600.5	5
Cc	369.1	5
Cryos. consts. A°		
B°		
t_e °C	301.06	5

Property	Value	Ref.
dt/dP °C/mm 25°C	35521.	5
BP	0.0595	2
t_e	0.03642	5
30 mm	0.8390	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.7	2
30 mm	70.26	5
BP	55.6	2
t_e	52.12	5
t_e (d, e)	51.51	5
$\Delta Hv/T_e$	19.28	5
d 160 to 290 °C	91.99	5
e	0.1344	5
d' 25 to 160 °C	86.18	5
e'	0.1130	5
d_c g/ml	0.24	2
v_c ml/g	4.190	2
t_c °C	437.	2
P_c mm	11400.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9170	5
t_e	0.8914	5
t_c	0.23	2
ΔHc kcal/m	2251.24	2
ΔHf		
ΔFf		
Viscosity centistokes η 210 °C	0.4819	2
230	0.4308	2
250	0.3878	2
270	0.3510	2
B^v 200 to 280 °C	608.0	4
A^v	$\bar{2}.42601$	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0239	4
n	0.0014	4
o	-0.0_648	4
m' 700 to 1000 °K	0.1156	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	27.1	2
30	26.2	2
40	25.3	2
Parachor [P] 20°C	630.6	4
30	631.1	4
40	631.4	4
Sugd.	619.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.86 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 156

NAME	n-Hexadecane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{34}$	Molecular Weight 226.432	$CH_3(CH_2)_{14}CH_3$

		Ref.
F.P. °C	18.165	2
F.P. 100%		
B.P. °C 760 mm	286.793	2
100	209.519	2
30	175.2	4
10	149.04	4
1	105.20	5
Pressure °C mm 71.87	0.00105	5
t_e	1474.2	5
Density g/ml 20°C	0.77344	2
d^t_4 25	0.76996	2
30	0.76648	4
a	0.7874	4
b	-0.0$_3$70	4
Ref. Index n_D 20°C	1.43453	2
25	1.43250	2
30	1.43036	4
"C"	0.7456	4
MR (Obs.)	76.32	5
MR (Calc.)	76.088	2
(nD-d/2)	1.04781	5
Dielectric	2.06	5
A 175 to 358 °C	7.03044	2
B	1831.317	2
C	154.528	2
A* 175 to 330 °C	1.70090	5
B*	1752.9	5
K		
c		
t_k to °C		
t_x		
A' 70 to 175 °C	7.33309	5
B'	2036.4	5
C'	172.5	5
A'* 70 to 175 °C	1.97708	5
B'*	1944.2	5
Ac 358 to t_c °C	8.7725	5
Bc	4015.9	5
Cc	397.6	5
Cryos. consts. A°		
B°		
t_e °C	319.7	5

		Ref.
dt/dP °C/mm 71.87°C	127.43	5
BP	0.06077	2
t_e	0.03617	5
30 mm	0.8596	5
ΔHm cal/g		
ΔHv cal/g 71.87°C	79.39	5
30 mm	68.43	5
BP	54.3	2
t_e	50.76	5
t_e (d, e)	50.13	5
ΔHv/T_e	19.38	5
d 175 to 310 °C	90.64	5
e	0.1267	5
d' 70 to 175 °C	88.46	5
e'	0.1143	5
d_c g/ml	0.24	2
v_c ml/g	4.195	2
t_c °C	452.	2
P_c mm	10640.	2
PV/RT 71.87°C	1.0000	5
30 mm	1.0000	5
BP	0.9197	5
t_e	0.8937	5
t_c	0.22	2
ΔHc kcal/m	2398.17	2
ΔHf		
ΔFf		
Viscosity centistokes η 225 °C	0.4816	2
245	0.4322	2
265	0.3910	2
285	0.3540	2
B^v 220 to 290 °C	626.8	4
A^v	2.42611	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0240	4
n	0.0014	4
o	-0.0$_6$48	4
m' 700 to 1000 °K	0.1230	4
n'	0.0012	4
o'	-0.0$_6$40	4
Surface tension dynes/cm. γ 20°C	27.6	2
30	26.7	2
40	25.8	2
Parachor [P] 20°C	671.0	4
30	671.5	4
40	672.0	4
Sugd.	658.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.87 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 157

NAME	n-Heptadecane	STRUCTURAL FORMULA
Mole % Pur. 99.0# (Ref. 3)	Molecular Formula $C_{17}H_{36}$; Molecular Weight 240.458	$CH_3(CH_2)_{15}CH_3$

Property	Value	Ref.
F.P. °C	21.980	2
F.P. 100%		
B.P. °C 760 mm	301.82	2
100	223.2	2
30	188.36	4
10	161.75	5
1	117.26	5
Pressure °C mm 83.5	0.0_3572	5
t_e	1510.3	5
Density g/ml d^t_4 20°C	0.7780≠	2
25	0.7745	2
30	0.7710	4
a	0.7920	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4369≠	2
25	1.4348	2
70	1.4170	3
"C"	0.7450	4
MR (Obs.)	80.96	2
MR (Calc.)	80.706	5
(nD-d/2)	1.0479	2
Dielectric	2.06	5
A (188 to 374 °C)	7.0115	2
B	1847.82	2
C	145.52	2
A* (188 to 347 °C)	1.7043	5
B*	1771.33	5
K		
c		
t_k / t_x (to °C)		
A' (85 to 188 °C)	7.3095	5
B'	2052.2	5
C'	163.5	5
A'* 85 to	1.96828	5
B'* 188 °C	1959.6	5
Ac (374 to t_c °C)	8.9220	5
Bc	4310.1	5
Cc	414.4	5
Cryos. consts. A°		
B°		
t_e °C	336.6	5

Property	Value	Ref.
dt/dP °C/mm 83.5°C	129.08	5
BP	0.0619	2
t_e	0.03618	5
30 mm	0.8733	5
ΔHm cal/g		
ΔHv cal/g 83.5°C	81.28	2
30 mm	67.20	5
BP	52.8	2
t_e	49.09	5
t_e (d, e)	48.38	5
ΔHv/T_e	19.36	5
d (188 to 337 °C)	91.10	5
e	0.1269	5
d' (85 to 188 °C)	88.3	5
e'	0.1343	5
d_c g/ml	0.24	2
v_c ml/g	4.159	2
t_c °C	462.	2
P_c mm	9880.	2
PV/RT 83.5°C	1.0000	5
30 mm	1.0000	5
BP	0.9176	5
t_e	0.8902	5
t_c	0.22	2
ΔHc kcal/m	2545.09	2
ΔHf		
ΔFf		
Viscosity centistokes η 240 °C	0.4804	2
260	0.4330	2
280	0.3920	2
300	0.3550	2
B^v (230 to 310 °C)	659.1	4
A^v	$\bar{2}$.40037	4
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0238	4
n	0.0014	4
o	-0.0_648	4
m' (700 to 1000 °K)	0.1161	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	28.0≠	2
30	27.1	2
40	26.2	2
Parachor [P] 20°C	711.0	4
30	711.6	4
40	712.1	4
Sugd.	697.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.88 T_c ≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

purity applies to $n_D^{70°C}$

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 158

NAME	n-Octadecane	STRUCTURAL FORMULA
Mole % Pur. 99.9# (Ref. 3)	Molecular Formula $C_{18}H_{38}$; Molecular Weight 254.484	$CH_3(CH_2)_{16}CH_3$

Property	Value	Ref.
F.P. °C	28.180	2
F.P. 100%		
B.P. °C 760 mm	316.12	2
100	236.	2
30	200.66	4
10	173.57	5
1	128.28	5
Pressure mm 25°C	0.0_473	5
t_e	1549.3	5
Density g/ml 20°C	0.7819≠	2
d^t_4 25	0.7785≠	2
30	0.7751	4
a	0.7955	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4390≠	2
25	1.4369≠	2
70	1.4191	3
"C"	0.7446	4
MR (Obs.)	85.61	5
MR (Calc.)	85.324	2
(nD-d/2)	1.0480	5
Dielectric	2.07	5
A 201 to 387 °C	7.0156	2
B	1883.73	2
C	139.46	2
A* 201 to 363 °C	1.7241	5
B*	1806.7	5
K		
c		
t_k to		
t_x °C		
A' 25 to 201 °C	7.3094	5
B'	2088.9	5
C'	157.5	5
A'* 25 to	2.03584	5
B'* 201 °C	2014.1	5
Ac 387 to t_c °C	9.1876	5
Bc	4810.2	5
Cc	449.57	5
Cryos. consts. A°		
B°		
t_e °C	353.0	5

Property	Value	Ref.
dt/dP °C/mm 25°C	94805.4	5
BP	0.0630	2
t_e	0.03608	5
30 mm	0.8890	5
ΔHm cal/g	57.65	3
ΔHv cal/g 25°C	85.3≠	2
30 mm	65.74	5
BP	51.5	2
t_e	47.69	5
t_e (d, e)	46.96	5
ΔHv/T_e	19.38	5
d 201 to 353 °C	90.49	5
e	0.1234	5
d' 25 to 201 °C	88.09	5
e'	0.1114	5
d_c g/ml	0.24	2
v_c ml/g	4.322	2
t_c °C	477.	2
P_c mm	9880.	2
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9178	5
t_e	0.8893	5
t_c	0.22	2
ΔHc kcal/m	2692.01	2
ΔHf		
ΔFf		
Viscosity centistokes η 190 °C	0.701	2
210	0.616	2
230	0.547	2
250	0.490	2
B^v 180 to 260 °C	628.1	4
A^v	$\bar{2}.48970$	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600°K	0.0236	4
n	0.0014	4
o	-0.0_649	4
m' 700 to 1000°K	0.1163	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	28.4≠	2
30	27.5	2
40	26.6	2
Parachor [P] 20°C	751.3	4
30	751.9	4
40	752.2	4
Sugd.	736.2	5
Exp. L. 1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.88 T_c ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

purity applies to $n_D^{70°C}$

No. 159

NAME	n-Nonadecane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{17}CH_3$

Mole % Pur. 99.5 #	Ref. 3	Molecular Formula $C_{19}H_{40}$	Molecular Weight 268.510

Property	Value	Ref.
F.P. °C	32.1	2
F.P. 100%		
B.P. °C 760 mm	329.7	2
100	248.	2
30	212.40	4
10	184.9	5
1	138.8	5
Pressure °C mm 54.24	0.001	5
t_e	1586.4	5
Density g/ml 20°C	0.7855≠	2
d_4^t 25	0.7821≠	2
30	0.7787≠	4
a	0.7991	4
b	-0.0$_3$68	4
Ref. Index n_D 20°C	1.4409≠	2
25	1.4388≠	2
70	1.4211≠	3
"C"	0.7442	4
MR (Obs.)	90.25	4
MR (Calc.)	89.942	2
(nD-d/2)	1.0481	4
Dielectric	2.08	5
A 212 to 403 °C	7.0192	2
B	1917.0	2
C	133.5	2
A* 212 to 379 °C	1.7427	5
B*	1839.43	5
K		
c		
t_k to		
t_x °C		
A' 25 to 212 °C	7.31561	5
B'	2127.54	5
C'	152.	5
A'* 25 to 212 °C	2.06337	5
B'*	2054.7	5
Ac 403 to t_c °C	9.4412	5
Bc	5302.	5
Cc	482.	5
Cryos. consts. A°		
B°		
t_e °C	368.49	5

Property	Value	Ref.
dt/dP °C/mm 54.24°C	8682.84	5
BP	0.0640	2
t_e	0.03599	5
30 mm	0.9035	5
ΔHm cal/g	40.78	3
ΔHv cal/g 54.24°C	83.23	5
30 mm	64.38	5
BP	50.3	2
t_e	46.37	5
t_e (d, e)	45.64	5
ΔHv/T_e	19.40	5
d 212 to 369 °C	89.88	5
e	0.1201	5
d' 54 to 212 °C	89.7	5
e'	0.1192	5
d_c g/ml	0.24	2
v_c ml/g	4.097	2
t_c °C	487.	2
P_c mm	9120.	2
PV/RT 54.24°C	1.0000	5
30 mm	1.0000	5
BP	0.9184	5
t_e	0.8885	5
t_c	0.22	2
ΔHc kcal/m	2838.94	2
ΔHf		
ΔFf		
Viscosity centistokes η 190 °C	0.757	2
210	0.662	2
230	0.586	2
250	0.524	2
B^v 200 to 260 °C	641.7	4
A^v	$\bar{2}$.49284	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0237	4
n	0.0014	4
o	-0.0$_6$49	4
m' 700 to 1000 °K	0.1164	4
n'	0.1165	4
o'	-0.0$_6$39	4
Surface tension dynes/cm. γ 20°C	28.7≠	2
30	27.8≠	2
40	26.9	2
Parachor [P] 20°C	791.2	4
30	791.8	4
40	792.2	4
Sugd.	775.2	5
Exp. L. 1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.89 T_c ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

purity applies to $n_D^{70°C}$

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 160

NAME	n-Eicosane	STRUCTURAL FORMULA
Mole % Pur. 99.9# (Ref. 3)	Molecular Formula $C_{20}H_{42}$	$CH_3(CH_2)_{18}CH_3$
	Molecular Weight 282.536	

Property	Value	Ref.
F.P. °C	36.8	2
F.P. 100%		
B.P. °C 760 mm	342.7	2
100	260.	2
30	223.61	4
10	195.7	5
1	148.9	5
Pressure °C mm 61.35	0.001	5
t_e	1608.	5
Density g/ml 20°C	0.7887≠	2
d^t_4 25	0.7853≠	2
70	0.7550	3
a	0.8023	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4426≠	2
25	1.4405≠	2
70	1.4230	3
"C"	0.7439	4
MR (Obs.)	94.90	4
MR (Calc.)	94.56	2
(nD-d/2)	1.0482	4
Dielectric	2.08	5
A 224 to 417 °C	7.0225	2
B	1948.7	2
C	127.8	2
A* 224 to 393 °C	1.77166	5
B*	1874.62	5
K		
c		
t_k to °C		
t_x		
A' 25 to 224 °C	7.30970	5
B'	2155.78	5
C'	146.	5
A'* 25 to 224 °C	2.07885	5
B'*	2085.2	5
Ac 417 to t_c °C	9.6945	5
Bc	5807.	5
Cc	513.	5
Cryos. consts. A°		
B°		
t_e °C	382.84	5

Property	Value	Ref.
dt/dP °C/mm 61.35°C	8808.41	5
BP	0.06492	5
t_e	0.03614	5
30 mm	0.9174	5
ΔHm cal/g	59.11	3
ΔHv cal/g 61.35°C	79.66	5
30 mm	63.08	5
BP	48.8	2
t_e	44.80	5
t_e (d, e)	43.99	5
$\Delta Hv/T_e$	19.29	5
d 224 to 383 °C	89.89	5
e	0.1199	5
d' 61 to 224 °C	85.93	5
e'	0.1022	5
d_c g/ml	0.24	2
v_c ml/g	4.247	2
t_c °C	502.	2
P_c mm	8360.	2
PV/RT 61.35°C	1.0000	5
30 mm	1.0000	5
BP	0.9122	5
t_e	0.8810	5
t_c	0.21	2
ΔHc kcal/m	2985.86	2
ΔHf		
ΔFf		
Viscosity centistokes η 190 °C	0.814	2
210	0.710	2
230	0.627	2
250	0.560	2
B^v 180 to 260 °C	651.4	4
A^v	$\bar{2}$.50316	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0236	4
n	0.0014	4
o	-0.0_649	4
m' 700 to 1000 °K	0.1162	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. 20°C	29.0≠	2
γ 30	28.1≠	2
40	27.2	2
Parachor [P] 20°C	831.3	4
30	832.0	4
40	832.4	4
Sugd.	814.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.89\,T_c$ ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

purity applies to $n_D^{70°C}$

No. 161

NAME	n-Heneicosane			STRUCTURAL FORMULA
Mole % Pur. 99.9[1]	Ref. 3	Molecular Formula $C_{21}H_{44}$	Molecular Weight 296.562	$CH_3(CH_2)_{19}CH_3$

Property	Value	Ref.
F.P. °C	40.5	2
F.P. 100%		
B.P. °C 760 mm	356.5	2
100	271.52	4
30	232.88	4
10	203.07	5
1	152.94	5
Pressure °C mm 114.64	0.1	5
t_e	1607.4	5
Density g/ml 20°C	0.7917≠	2
d_4^t 25	0.7883≠	2
70	0.7583[1]	3
a	0.8053	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4441≠	2
25	1.4420≠	2
70	1.4247[1]	3
"C"	0.7434	4
MR (Obs.)	99.52≠	2
MR (Calc.)	99.178	5
(nD-d/2)	1.0483≠	2
Dielectric	2.09	5
A 115 to 492 °C	7.47174	5
B	2424.	5
C	171.5	5
A* 115 to 410 °C	2.24451	5
B*	2343.	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 110 to 233 °C	2.15834	5
B'*	2309.1	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	396.79	5

Property	Value	Ref.
dt/dP °C/mm 114.64°C.	150.40	5
BP	0.0657	4
t_e	0.0360	5
30 mm	0.9765	5
ΔHm cal/g	38.44	3
ΔHv cal/g 114.64°C.	68.7	5
30 mm	58.50	5
BP	47.05	5
t_e	43.69	5
t_e (d, e)	43.30	5
ΔHv/T_e	19.33	5
d 232 to 397 °C	80.06	5
e	0.0926	5
d' 115 to 232 °C	78.58	5
e'	0.0862	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 114.64°C.	1.0000	5
30 mm	1.0000	5
BP	0.8948	5
t_e	0.8624	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. 20°C	26.91	5
γ 30	26.00	5
40	25.11	5
Parachor [P] 20°C		
30		
40		
Sugd.	853.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid. + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

[1] purity applies to $n_D^{70°C.}$ and d_4^t

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 162

NAME	n-Docosane	STRUCTURAL FORMULA
Mole % Pur. 99.7[1]	Ref. 3	$CH_3(CH_2)_{20}CH_3$
Molecular Formula	$C_{22}H_{46}$	
Molecular Weight	310.588	

Property	Value	Ref.
F.P. °C	44.4	2
F.P. 100%		
B.P. °C 760 mm	368.6	2
100	282.39	4
30	243.15	4
10	212.86	5
1	161.88	5
Pressure mm 122.90	0.1	5
t_e	1637.4	5
Density g/ml 20°C	0.7944≠	2
d^t_4 25	0.7910≠	2
70	0.7631[1]	3
a	0.8080	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4455≠	2
25	1.4435≠	2
70	1.4260[1]	3
"C"	0.7431	4
MR (Obs.)	104.16≠	2
MR (Calc.)	103.796	5
(nD-d/2)	1.0483≠	2
Dielectric	2.09	5
A 242 to	7.49602	5
B 499°C	2482.52	5
C	169.3	5
A* 242 to	2.28329	5
B* 420 °C	2401.2	5
K		
c		
t_k to		
t_x °C		
A'		
B'		
C'		
A'* 110 to	2.20092	5
B'* 242 °C	2367.2	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	410.47	5

Property	Value	Ref.
dt/dP °C/mm 122.90°C.	149.36	5
BP	0.0666	4
t_e	0.0359	5
30 mm	0.9920	5
ΔHm cal/g	37.67	3
ΔHv cal/g 122.90°C.	67.19	5
30 mm	57.28	5
BP	46.00	5
t_e	42.60	5
t_e (d, e)	43.38	5
ΔHv/T_e	19.82	5
d 242 to	79.14	5
e 410 °C	0.0899	5
d' 110 to	77.32	5
e' 242 °C	0.0824	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 122.90°C.	1.0000	5
30 mm	1.0000	5
BP	0.8943	5
t_e	0.8609	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.12	5
30	26.20	5
40	25.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	892.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

[1] purity applies to $n_D^{70°C.}$ and d^t_4

No. 163

NAME	n-Tricosane	STRUCTURAL FORMULA
Mole % Pur. 99.6[1]	Ref.	Molecular Formula $C_{23}H_{48}$	Molecular Weight 324.614	$CH_3(CH_2)_{21}CH_3$

Property	Value	Ref.
F.P. °C	47.6	2
F.P. 100%		
B.P. °C 760 mm	380.2	2
100	292.84	4
30	253.03	4
10	222.27	5
1	170.48	5
Pressure °C mm 130.85	0.1	5
t_e	1666.0	5
Density g/ml 20°C	0.7969≠	2
d^t_4 25	0.7935≠	2
70	0.7641[1]	3
a	0.8105	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4468≠	2
25	1.4448≠	2
70	1.4276[1]	3
"C"	0.7428	4
MR (Obs.)	108.80≠	2
MR (Calc.)	108.414	5
(nD-d/2)	1.0484≠	2
Dielectric	2.09	5
A 252 to 506 °C	7.51789	5
B	2537.9	5
C	167.1	5
A* 252 to 433 °C	2.31840	5
B*	2456.0	5
K		
c		
t_k to t_x °C		
A' B' C'		
A'* 125 to 252 °C	2.22338	5
B'*	2420.4	5
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	423.63	5

Property	Value	Ref.
dt/dP 130.85°C.		
25°C	151.91	5
BP	0.0675	2
t_e	0.0358	5
30 mm	1.0068	5
ΔHm cal/g	39.74	3
ΔHv cal/g 130.85°C.	65.77	5
30 mm	56.07	5
BP	44.99	5
t_e	41.56	5
t_e (d, e)	42.38	5
ΔHv/T_e	19.83	5
d 252 to 423 °C	78.11	5
e	0.0871	5
d' 125 to 252 °C	76.16	5
e'	0.0794	5
d_c g/ml, v_c ml/g, t_c °C, P_c mm		
PV/RT 130.85°C.	1.0000	5
30 mm	1.0000	5
BP	0.8936	5
t_e	0.8594	5
t_c		
ΔHc kcal/m, ΔHf, ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C, (B^v), (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	27.31	5
30	26.39	5
40	25.49	5
Parachor [P] 20°C, 30, 40		
Sugd.	931.2	5
Exp. L.1.%/wt. u. Dispersion	98.≠	2
Flash Point °C, Fire Point		
M. Spec., Ultra V., X-Ray Dif., Infrared		
Solubility in[+] Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

≠ for undercooled liquid

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

[1] purity applies to $n_D^{70°C.}$ and d^t_4

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 164

NAME	n-Tetracosane			STRUCTURAL FORMULA
Mole % Pur. 99.9[1]	Ref. 3	Molecular Formula $C_{24}H_{50}$	Molecular Weight 338.640	$CH_3(CH_2)_{22}CH_3$

		Ref.
F.P. °C	50.9	2
F.P. 100%		
B.P. °C 760 mm	391.3	2
100	302.82	4
30	262.46	4
10	231.3	5
1	178.7	5
Pressure mm 138.4 °C	0.1	5
t_e	1694.4	5
Density g/ml 20°C	0.7991≠	2
d^t_4 25	0.7958≠	2
70	0.7657[1]	3
a	0.8123	4
b	$-0.0_{3}66$	4
Ref. Index n_D 20°C	1.4480≠	2
25	1.4460≠	2
70	1.4286[1]	3
"C"	0.7427	5
MR (Obs.)	113.44≠	2
MR (Calc.)	113.032	5
(nD-d/2)	1.0484≠	2
Dielectric	2.10	5
A 260 to 500 °C	7.53923	5
B	2591.9	5
C	165.1	
A* 260 to 450 °C	2.35245	5
B*	2509.5	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* 135 to 260 °C	2.26522	5
B'*	2472.2	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	436.24	5

		Ref.
dt/dP °C/mm 138.4°C.	154.37	5
BP	0.0683	4
t_e	0.0358	5
30 mm	1.021	5
ΔHm cal/g	38.74	3
ΔHv cal/g 138.4°C.	64.4	5
30 mm	54.93	5
BP	44.05	5
t_e	40.59	5
t_e (d, e)	40.35	5
$\Delta Hv/T_e$	19.40	5
d 260 to 435 °C	77.09	5
e	0.0844	5
d' 135 to 260 °C	74.96	5
e'	0.0763	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 138.4°C.	1.0000	5
30 mm	1.0000	5
BP	0.8933	5
t_e	0.8583	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	27.47	5
γ 30	26.58	5
40	25.70	5
Parachor [P] 20°C		
30		
40		
Sugd.	970.2	5
Exp. L.1.%/wt. u. Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

[1] purity applies to $n_D^{70°C.}$ and d^t_4

No. 165

NAME	n-Pentacosane			STRUCTURAL FORMULA
Mole % Pur. 99.8[1]	Ref. 3	Molecular Formula $C_{25}H_{52}$	Molecular Weight 352.666	$CH_3(CH_2)_{23}CH_3$

		Ref.
F.P. °C	53.7	2
F.P. 100%		
B.P. °C 760 mm	401.9	2
100	312.36	4
30	271.48	4
10	239.87	5
1	186.55	5
Pressure mm °C 145.7	0.1	5
t_e	1720.0	5
Density g/ml 20°C	0.8012≠	2
d_4^t 25	0.7979≠	2
70	0.7693[1]	3
a	0.8144	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4491≠	2
25	1.4471≠	2
70	1.4302[1]	3
"C"	0.7424	5
MR (Obs.)	118.09≠	2
MR (Calc.)	117.65	5
(nD-d/2)	1.0485≠	2
Dielectric	2.10	5
A 270 to 500 °C	7.55835	5
B	2642.8	5
C	163.1	5
A* 270 to 460 °C	2.38417	5
B*	2560.0	5
K		
c		
t_k to t_x °C		
A' B' C'		
A'* 140 to 270 °C	2.29501	5
B'*	2521.2	5
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	448.26	5

		Ref.
dt/dP °C/mm 145.7°C.	156.7	5
BP	0.0690	2
t_e	0.0357	2
30 mm	1.0345	5
ΔHm cal/g	39.13	3
ΔHv cal/g 145.7°C.	63.08	5
30 mm	53.82	5
BP	43.12	5
t_e	39.64	5
t_e (d, e)	40.36	5
ΔHv/T_e	19.84	5
d 270 to 447 °C	76.09	5
e	0.0820	5
d' 140 to 270 °C	73.82	5
e'	0.0737	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 145.7°C.	1.0000	5
30 mm	1.0000	5
BP	0.8927	5
t_e	0.8570	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	27.63	5
30	26.73	5
40	25.86	5
Parachor [P] 20°C		
30		
40		
Sugd.	1009.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

[1] purity applies to $n_D^{70°C.}$ and d_4^t

No. 166

NAME	n-Hexacosane	STRUCTURAL FORMULA
Mole % Pur. 99.8[1]	Ref. 3	Molecular Formula $C_{26}H_{54}$
Molecular Weight 366.692		$CH_3(CH_2)_{24}CH_3$

Property	Value	Ref.
F.P. °C	56.4	2
F.P. 100%		
B.P. °C 760 mm	412.2	2
100	321.64	4
30	280.25	4
10	248.22	5
1	194.18	5
Pressure mm 152.75°C	0.1	5
t_e	1746.1	5
Density g/ml 20°C	0.8032≠	2
d^t_4 25	0.7998≠	2
70	0.7704[1]	3
a	0.8168	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4501≠	2
25	1.4481≠	2
70	1.4310[1]	3
"C"	0.7421	5
MR (Obs.)	122.73≠	2
MR (Calc.)	122.268	5
(nD-d/2)	1.0485≠	2
Dielectric	2.103	5
A 278 to 500 °C	7.57689	5
B	2692.73	5
C	161.2	5
A* 278 to 470 °C	2.41467	5
B*	2609.5	5
K		
c		
t_k to °C		
t_x		
A'		
B'		
C'		
A'* 140 to 278 °C	2.32296	5
B'*	2569.0	5
Ac t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	459.98	5

Property	Value	Ref.
dt/dP °C/mm 152.75°C.	158.97	5
BP	0.0698	2
t_e	0.0356	5
30 mm	1.0477	5
ΔHm cal/g		
ΔHv cal/g 152.75°C.	61.84	5
30 mm	52.78	5
BP	42.24	5
t_e	38.72	5
t_e (d, e)	39.42	5
$\Delta Hv/T_e$	19.82	5
d 278 to 460 °C	75.17	5
e	0.0799	5
d' 140 to 278 °C	72.68	5
e'	0.0710	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 152.75°C.	1.0000	5
30 mm	1.0000	5
BP	0.8924	5
t_e	0.8560	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °C		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °C		
f', g', h' to °C		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.79	5
30	26.86	5
40	25.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	1048.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

[1] purity applies to $n_D^{70°C.}$ and d^t_4

No. 167

NAME	n-Heptacosane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{25}CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.0[1]	3	$C_{27}H_{56}$	380.718

Property	Value	Ref.
F.P. °C	59.0	2
F.P. 100%		
B.P. °C 760 mm	422.1	2
100	330.55	4
30	288.67	4
10	256.26	5
1	201.54	5
Pressure °C mm 159.55	0.1	5
t_e	1770.4	5
Density g/ml 20°C	0.8050≠	2
d^t_4 25	0.8016≠	2
70	0.7732[1]	3
a	0.8186	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4511≠	2
25	1.4491≠	2
70	1.4321[1]	3
"C"	0.7420	4
MR (Obs.)	127.37≠	2
MR (Calc.)	126.886	5
(nD-d/2)	1.0486≠	2
Dielectric	2.11	5
A 285 to 520 °C	7.59371	5
B	2740.08	5
C	159.3	5
A* 285 to 500 °C	2.4430	5
B*	2656.4	5
K		
c		
t_k to t_x °C		
A'		
B'		
C'		
A'* 150 to 285 °C	2.35017	5
B'*	2614.8	5
Ac to Bc t_c °C Cc		
Cryos. consts. A°		
B°		
t_e °C	471.24	5

Property	Value	Ref.
dt/dP °C/mm 159.55°C.	161.13	5
BP	0.070	2
t_e	0.03463	5
30 mm	1.0544	5
ΔHm cal/g	37.93	3
ΔHv cal/g 159.55°C.	60.65	5
30 mm	51.8	5
BP	41.4	5
t_e	38.6	5
t_e (d, e)	38.76	5
ΔHv/T_e	19.90	5
d 285 to 470 °C	74.30	5
e	0.0779	5
d' 150 to 285 °C	71.58	5
e'	0.0685	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 159.55°C.	1.0000	5
30 mm	1.0000	5
BP	0.8919	5
t_e	0.8548	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.93	5
30	26.99	5
40	26.09	5
Parachor [P] 20°C		
30		
40		
Sugd.	1087.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A.A. et al.

[1]purity applies to $n_D^{70°C.}$ and d^t_4

No. 168

NAME	n-Octacosane			STRUCTURAL FORMULA
Mole % Pur. 99.0[1]	Ref. 3	Molecular Formula $C_{28}H_{58}$	Molecular Weight 394.744	$CH_3(CH_2)_{26}CH_3$

Property	Value	Ref.
F.P. °C	61.4	2
F.P. 100%		
B.P. °C 760 mm	431.6	2
100	339.10	4
30	296.76	4
10	263.97	5
1	208.58	5
0.1	166.06	5
Press. mm t_e	1737.2	5
Density g/ml 20°C	0.8067≠	2
d^t_4 25	0.8033≠	2
70	0.7750[1]	3
a	0.8203	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4520≠	2
25	1.4500≠	2
70	1.4330[1]	3
"C"	0.7418	4
MR (Obs.)	132.01≠	2
MR (Calc.)	131.504	5
(nD-d/2)	1.0487≠	2
Dielectric	2.11	5
A 295 to 520 °C	7.60972	5
B	2785.80	5
C		
A* 295 to 490 °C	2.47084	5
B*	2702.8	5
K		
c		
t_k to, t_x °C		
A' to °C		
B'		
C'		
A'* 162 to 295 °C	2.37498	5
B'*	2658.5	5
Ac, Bc, Cc t_c to °C		
Cryos. consts. A°, B°		
t_e °C	480.	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	163.21	5
BP	0.071	2
t_e	0.03475	5
30 mm	1.0682	5
ΔHm cal/g	39.14	3
ΔHv cal/g 0.1 mm	59.50	5
30 mm	50.8	5
BP	40.6	5
t_e	37.8	5
t_e (d, e)	37.77	5
ΔHv/T_e	19.79	5
d 295 to 480 °C	73.25	5
e	0.0756	5
d' 162 to 295 °C	70.56	5
e'	0.0666	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8912	5
t_e	0.8535	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to, A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.06	5
30	27.12	5
40	26.21	5
Parachor [P] 20°C		
30		
40		
Sugd.	1126.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

[1] purity applies to $n_D^{70°C}$ and d^t_4

No. 169

NAME	n-Nonacosane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{27}CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.5	3	$C_{29}H_{60}$	408.770

		Ref.
F.P. °C	63.7	2
F.P. 100%		
B.P. °C		
760 mm	440.8	2
100	347.38	4
30	304.59	4
10	271.43	5
1	215.40	5
0.1	172.36	5
Press. mm t_e	1816.9	5
Density g/ml 20°C	0.8083≠	2
d_4^t 25	0.8049≠	2
30	0.8015≠	4
a	0.8219≠	4
b	-0.0368≠	4
Ref. Index n_D 20°C	1.4529≠	2
25	1.4508≠	2
30	1.4488≠	4
"C"	0.7418	4
MR (Obs.)	136.65≠	2
MR (Calc.)	136.122	5
(nD-d/2)	1.0487≠	2
Dielectric	2.11	5
A 302 to	7.62529	5
B 500 °C	2830.55	5
C		
A* 302 to	2.49691	5
B* 501 °C	2746.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 169 to	2.39938	5
B'* 302 °C	2701.3	5
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	492.51	5

		Ref.
dt/dP °C/mm		
0.1 mm	165.23	5
BP	0.071	5
t_e	0.0347	5
30 mm	1.0796	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm	58.40	5
30 mm	49.9	5
BP	39.8	5
t_e	37.1	5
t_e (d, e)	36.94	5
$\Delta Hv/T_e$	19.78	5
d 302 to	72.49	5
e 491 °C	0.0742	5
d' 169 to	69.47	5
e' 302 °C	0.0643	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8527	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	28.18≠	5
30	27.25≠	5
40	26.33≠	5
Parachor [P] 20°C		
30		
40		
Sugd.	1165.2	5
Exp. L. 1. %/wt. u. Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77(2019) 1955 Schoerer A.A. et al.

No. 170

NAME	n-Triacontane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{28}CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.0[1]	3	$C_{30}H_{62}$	422.796

Property	Value	Ref.
F.P. °C	65.8	2
F.P. 100%		
B.P. °C 760 mm	449.7	2
100	355.40	4
30	312.16	4
10	278.65	5
1	222.00	5
0.1	178.46	5
Press. mm t_e	1838.9	5
Density g/ml 20°C	0.8097≠	2
d_4^t 25	0.8064≠	2
30	0.8031	4
a	0.8229	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4536≠	2
25	1.4516≠	2
70	1.4348[1]	3
"C"	0.7415	4
MR (Obs.)	141.29≠	2
MR (Calc.)	140.74	5
(nD-d/2)	1.0487≠	2
Dielectric	2.11	5
A 309 to 481 °C	7.64044	5
B	2874.34	5
C		
A* 309 to 511 °C	2.52257	5
B*	2789.6	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* 175 to 309 °C	2.42407	5
B'*	2743.7	5
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	502.65	2

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	167.20	5
BP	0.072	5
t_e	0.03469	5
30 mm	1.0907	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	57.33	5
30 mm	49.0	5
BP	39.1	5
t_e	36.3	5
t_e (d, e)	36.13	5
ΔHv/T_e	19.77	5
d 309 to 510 °C	71.47	5
e	0.0720	5
d' 170 to 309 °C	68.45	5
e'	0.0623	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8906	5
t_e	0.8517	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.29	5
30	27.37	5
40	26.49	5
Parachor [P] 20°C		
30		
40		
Sugd.	1204.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

[1] purity applies to $n_D^{70°C}$.

No. 171

NAME	n-Hentriacontane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{31}H_{64}$	Molecular Weight 436.822
			$CH_3(CH_2)_{29}CH_3$

		Ref.
F.P. °C	67.9	2
F.P. 100%		
B.P. °C 760 mm	458.	2
100	362.87	4
30	319.23	4
10	285.40	5
1	228.17	5
0.1	184.17	5
Press. mm t_e	1859.3	5
Density g/ml 20°C	0.8111≠	2
d^t_4 25	0.8078≠	2
30	0.8045	4
a	0.8243	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4543≠	2
25	1.4523≠	2
30	1.4503	4
"C"	0.7413	4
MR (Obs.)	145.93≠	2
MR (Calc.)	145.358	5
(nD-d/2)	1.0487	2
Dielectric	2.11	5
A 320 to 485 °C	7.65344	5
B	2914.17	5
C		
A* 320 to 518 °C	2.54572	5
B*	2829.	5
K		
c		
t_k t_x to °C		
A' B' C' to °C		
A'* 180 to 320 °C	2.44635	5
B'*	2782.1	5
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	512.12	5

		Ref.
dt/dP °C/mm 0.1 mm	169.01	5
BP	0.073	5
t_e	0.03336	5
30 mm	1.0818	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	56.29	5
30 mm	48.1	5
BP	38.4	5
t_e	35.6	5
t_e (d, e)	36.69	5
ΔHv/T_e	20.52	5
d 320 to 508 °C	70.41	5
e	0.0699	5
d' 180 to 320 °C	67.46	5
e'	0.0607	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8905	5
t_e	0.8511	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.40	5
30	27.48	5
40	26.59	5
Parachor [P] 20°C		
30		
40		
Sugd.	1243.2	5
Exp. L.1.%/wt. u. Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 172

NAME	n-Dotriacontane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{32}H_{66}$ / Molecular Weight 450.848	$CH_3(CH_2)_{30}CH_3$

Property	Value	Ref.
F.P. °C	69.7	2
F.P. 100%		
B.P. °C 760 mm	467.	2
100	370.97	4
30	326.88	4
10	292.69	4
1	234.83	5
0.1	190.32	5
Press. mm t_e	1884.1	5
Density g/ml 20°C	0.8124≠	2
d_4^t 25	0.8091≠	2
30	0.8058	4
a	0.8256	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4550≠	2
25	1.4530≠	2
30	1.4516	4
"C"	0.7412	4
MR (Obs.)	150.57≠	2
MR (Calc.)	149.976	5
(nD-d/2)	1.0488≠	2
Dielectric	2.12	5
A (324 to 530 °C)	7.66838	5
B	2958.7	5
C		
A* (324 to 530 °C)	2.56852	5
B*	2872.3	5
K, c, t_k, t_x (to °C)		
A', B', C' (to °C)		
A'* 186 to	2.46864	5
B'* 324 °C	2824.6	5
Ac, Bc, Cc (t_c to °C)		
Cryos. consts. A°, B°		
t_e °C	522.46	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	171.00	5
BP	0.073	5
t_e	0.0347	5
30 mm	1.1119	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	55.37	5
30 mm	47.1	5
BP	38.24	5
t_e	35.0	5
t_e (d, e)	34.67	5
ΔHv/T_e	19.71	5
d (324 to 520 °C)	67.70	5
e	0.0632	5
d' (186 to 324 °C)	66.96	5
e'	0.0609	5
d_c g/ml, v_c ml/g, t_c °C, P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8500	5
t_c		
ΔHc kcal/m, ΔHf, ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C), (B^v), (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	28.50	5
30	27.58	5
40	26.69	5
Parachor [P] 20°C, 30, 40		
Sugd.	1282.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec., Ultra V., X-Ray Dif., Infrared		
Solubility in⁺ Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

≠ for undercooled liquid

⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 173

NAME	n-Tritriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3(CH_2)_{31}CH_3$
Molecular Formula	$C_{33}H_{68}$	
Molecular Weight	464.874	

Property	Value	Ref.
F.P. °C	71.4	2
F.P. 100%		
B.P. °C		
760 mm	475.	2
100	378.17	4
30	333.70	4
10	299.19	5
1	240.77	5
0.1	195.81	5
Press. mm t_e	1900.8	5
Density g/ml 20°C	0.8136≠	2
d_4^t 25	0.8103≠	2
30	0.8070	4
a	0.8268	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4557≠	2
25	1.4536≠	2
30	1.4517	4
"C"	0.7412	4
MR (Obs.)	155.21≠	2
MR (Calc.)	154.594	5
(nD-d/2)	1.0488≠	2
Dielectric	2.12	5
A 330 to	7.68082	5
B 539 °C	2997.60	5
C		
A* 330 to	2.59301	5
B* 539 °C	2912.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 185 to	2.48943	5
B'* 330 °C	2862.0	5
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	531.48	5

Property	Value	Ref.
dt/dP °C/mm		
0.1 mm	172.76	5
BP	0.074	5
t_e	0.03462	5
30 mm	1.1221	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm	54.42	5
30 mm	46.5	5
BP	37.1	5
t_e	34.3	5
t_e (d, e)	33.99	5
ΔHv/T_e	19.69	5
d 330 to	68.70	5
e 529 °C	0.0665	5
d' 190 to	65.66	5
e' 330 °C	0.0574	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8895	5
t_e	0.8491	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	28.59	5
30	27.67	5
40	26.78	5
Parachor [P] 20°C		
30		
40		
Sugd.	1321.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 174

NAME	n-Tetratriacontane	STRUCTURAL FORMULA
Mole % Pur. Ref.	Molecular Formula $C_{34}H_{70}$	Molecular Weight 478.900	$CH_3(CH_2)_{32}CH_3$

		Ref.
F.P. °C	73.1	2
F.P. 100%		
B.P. °C 760 mm	482.	2
100	384.47	4
30	339.65	4
10	304.87	5
1	245.97	5
0.1	200.62	5
Press. mm t_e	1918.5	5
Density g/ml 20°C	0.8148≠	2
d_4^t 25	0.8115≠	2
30	0.8082	4
a	0.8280	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4563≠	2
25	1.4542≠	2
30	1.4524	4
"C"	0.7410	4
MR (Obs.)	159.85≠	2
MR (Calc.)	159.212	5
(nD-d/2)	1.0488≠	2
Dielectric	2.12	5
A 336 to 547 °C	7.69164	5
B	3031.78	5
C		
A* 336 to 547 °C	2.61320	5
B*	2945.7	5
K, c, t_k to t_x °C		
A' to °C, B', C'		
A'* 190 to 336 °C	2.50973	5
B'*	2895.2	5
Ac, Bc, Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	539.49	5

		Ref.
dt/dP °C/mm 0.1 mm	174.29	5
BP	0.074	5
t_e	0.03457	5
30 mm	1.1310	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	53.44	5
30 mm	45.7	5
BP	36.4	5
t_e	33.7	5
t_e (d, e)	33.32	5
ΔHv/T_e	19.69	5
d 336 to 537 °C	67.89	5
e	0.0653	5
d' 190 to 336 °C	64.60	5
e'	0.0557	5
d_c g/ml, v_c ml/g, t_c °C, P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8895	5
t_e	0.8486	5
t_c		
ΔHc kcal/m, ΔHf, ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C; (B^v), (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K; f', g', h' to °K		
m, n, o to °K; m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.68	5
30	27.77	5
40	26.87	5
Parachor [P] 20°C, 30, 40		
Sugd.	1360.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C, Fire Point		
M Spec., Ultra V., X-Ray Dif., Infrared		
Solubility in + Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

≠ for undercooled liquid — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 175

NAME	n-Pentatriacontane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{35}H_{72}$	Molecular Weight 492.926
			$CH_3(CH_2)_{33}CH_3$

Property	Value	Ref.
F.P. °C	74.7	2
F.P. 100%		
B.P. °C 760 mm	490.	2
100	391.68	4
30	346.47	4
10	311.36	5
1	251.90	5
0.1	206.10	5
Press. mm t_e	1938.5 •	5
Density g/ml 20°C	0.8157≠	2
d^t_4 25	0.8124≠	2
30	0.8093	4
a	0.8289	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4568≠	2
25	1.4548≠	2
30	1.4529	4
"C"	0.7408	4
MR (Obs.)	164.49≠	2
MR (Calc.)	163.83	5
(nD-d/2)	1.0489≠	2
Dielectric	2.12	5
A 343 to 505 °C	7.70371	5
B	3070.74	5
C	147.	5
A* 343 to 546 °C	2.63438	5
B*	2984.4	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* 200 to 343 °C	2.52835	5
B'*	2932.1	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	548.62	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	176.04	5
BP	0.0754	5
t_e	0.03453	5
30 mm	1.141	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	52.60	5
30 mm	45.0	5
BP	35.8	5
t_e	33.1	5
t_e (d, e)	32.73	5
ΔHv/T_e	19.67	5
d 343 to 546 °C	67.21	5
e	0.0641	5
d' 200 to 343 °C	63.76	5
e'	0.0541	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8892	5
t_e	0.8478	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	28.74	5
γ 30	27.85	5
40	26.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	1399.2	5
Exp. L.1.%/wt. u. Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 176

NAME	n-Hexatriacontane	STRUCTURAL FORMULA
Mole % Pur. 99.0	Ref. 3	Molecular Formula $C_{36}H_{74}$
Molecular Weight 506.952		$CH_3(CH_2)_{34}CH_3$

Property	Value	Ref.
F.P. °C	76.2	2
F.P. 100%		
B.P. °C 760 mm	497.	2
100	397.98	4
30	352.43	4
10	317.06	5
1	257.11	5
0.1	210.93	5
Press. mm t_e	1938.	5
Density g/ml 20°C	0.8169≠	2
d^t_4 25	0.8136≠	2
30	0.8103	4
a	0.8301	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4573≠	2
25	1.4554≠	2
30	1.4534	4
"C"	0.7406	4
MR (Obs.)	169.13≠	2
MR (Calc.)	168.448	5
(nD-d/2)	1.0489≠	2
Dielectric	2.12	5
A (349 to 560 °C)	7.71344	5
B	3104.00	5
C	145.	5
A* (349 to 560 °C)	2.65726	5
B*	3017.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	556.3	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	177.75	5
BP	0.0759	5
t_e	0.0355	5
30 mm	1.155	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		5
30 mm	43.65	5
BP	35.2	5
t_e	31.23	5
t_e (d, e)	31.7	5
ΔHv/T_e	19.09	5
d (349 to 554 °C)	64.22	5
e	0.0584	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8852	5
t_e	0.8397	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.85	5
30	27.93	5
40	27.03	5
Parachor [P] 20°C		
30		
40		
Sugd.	1438.2	5
Exp. L.1.%/wt. u.		
Dispersion	98. ≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 177

NAME	n-Heptatriacontane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{35}CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{37}H_{76}$	520.978

Property	Value	Ref.
F.P. °C	77.7	2
F.P. 100%		
B.P. °C 760 mm	504.	2
100	404.28	4
30	358.39	4
10	322.74	5
1	262.32	5
0.1	215.74	5
Press. mm t_e	1973.0	5
Density g/ml 20°C	0.8179≠	2
d_4^t 25	0.8146≠	2
30	0.8113	4
a	0.8311	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4578≠	2
25	1.4559≠	2
30	1.4539	4
"C"	0.7405	4
MR (Obs.)	173.77≠	2
MR (Calc.)	173.066	5
(nD-d/2)	1.0489≠	2
Dielectric	2.13	5
A 355 to 570 °C	7.72381	5
B	3138.26	5
C	144.	5
A* 355 to 570 °C	2.67222	5
B*	3051.3	5
K		
c		
t_k t_x to °C		
A' B' C' to °C		
A'* 210 to 355 °C	2.56511	5
B'*	2997.5	5
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	564.63	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	179.09	5
BP	0.0764	5
t_e	0.3449	5
30 mm	1.1590	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	50.91	5
30 mm	43.6	5
BP	34.6	5
t_e	32.0	5
t_e (d, e)	31.54	5
ΔHv/T_e	19.61	5
d 355 to 562 °C	65.75	5
e	0.0618	5
d' 210 to 355 °C	61.96	5
e'	0.0512	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8888	5
t_e	0.8465	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.93	5
30	28.00	5
40	27.10	5
Parachor [P] 20°C		
30		
40		
Sugd.	1477.2	5
Exp. L. l. %/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 178

NAME	n-Octatriacontane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{38}H_{78}$	Molecular Weight 535.004
			$CH_3(CH_2)_{36}CH_3$

		Ref.
F.P. °C	79.0	2
F.P. 100%		
B.P. °C 760 mm	511.	2
100	410.58	4
30	364.35	4
10	328.43	5
1	267.51	5
0.1	220.55	5
Press. mm t_e	1990.2	5
Density g/ml 20°C	0.8188≠	2
d_4^t 25	0.8155≠	2
30	0.8122	4
a	0.8320	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4583≠	2
25	1.4564≠	2
30	1.4543	4
"C"	0.7404	4
MR (Obs.)	178.41≠	2
MR (Calc.)	177.684	5
(nD-d/2)	1.0489≠	2
Dielectric	2.13	5
A 361 to 521°C	7.73405	5
B	3172.56	5
C		
A* 361 to 580°C	2.69112	5
B*	3085.4	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* 216 to	2.58304	5
B'* 361 °C	3030.2	5
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	572.63	5

		Ref.
dt/dP °C/mm		
0.1 mm	180.62	5
BP	0.076	5
t_e	0.03444	5
30 mm	1.1679	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm	50.12	5
30 mm	42.9	5
BP	34.1	5
t_e	31.4	5
t_e (d, e)	31.0	5
ΔHv/T_e	19.59	5
d 361 to	64.76	5
e 570 °C	0.0600	5
d' 216 to	61.20	5
e' 361 °C	0.0502	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8889	5
t_e	0.8458	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.99	5
30	28.07	5
40	27.17	5
Parachor [P] 20°C		
30		
40		
Sugd.	1516.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 179

NAME	n-Nonatriacontane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{39}H_{80}$ / Molecular Weight 549.030	$CH_3(CH_2)_{37}CH_3$

Property	Value	Ref.
F.P. °C	80.3	2
F.P. 100%		
B.P. °C 760 mm	518.	2
100	416.88	4
30	370.30	4
10	334.10	5
1	272.69	5
0.1	225.33	5
Press. mm t_e	2007.1	5
Density g/ml 20°C	0.8197≠	2
d_4^t 25	0.8164≠	2
30	0.8131	4
a	0.8329	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4588≠	2
25	1.4568≠	2
30	1.4549	4
"C"	0.7404	4
MR (Obs.)	183.05≠	2
MR (Calc.)	182.302	5
(nD-d/2)	1.0490≠	2
Dielectric	2.13	5
A 366 to 523 °C	7.74491	5
B	3207.87	5
C		
A* 366 to 587 °C	2.71037	5
B*	3120.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 220 to	2.60082	5
B'* 366 °C	3064.4	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	580.62	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	182.18	5
BP	0.076	5
t_e	0.0345	5
30 mm	1.1755	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	49.37	5
30 mm	42.3	5
BP	33.6	5
t_e	30.9	5
t_e (d, e)	30.43	5
ΔHv/T_e	19.54	5
d 366 to 577 °C	64.11	5
e	0.0589	5
d' 220 to 366 °C	60.35	5
e'	0.0488	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8451	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.07	5
30	28.14	5
40	27.24	5
Parachor [P] 20°C		
30		
40		
Sugd.	1555.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 180

NAME	n-Tetracontane	STRUCTURAL FORMULA
		$CH_3(CH_2)_{38}CH_3$
Mole % Pur. / Ref.	Molecular Formula $C_{40}H_{82}$	Molecular Weight 563.056

Property	Value	Ref.
F.P. °C	81.5	2
F.P. 100%		
B.P. °C 760 mm	525.	2
100	423.19	4
30	376.27	4
10	339.79	5
1	277.91	5
0.1	230.17	5
Press. mm t_e	2025.3	5
Density g/ml 20°C	0.8205≠	2
d_4^t 25	0.8172≠	2
30	0.8139	4
a	0.8337	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4593≠	2
25	1.4573≠	2
30	1.4553	4
"C"	0.7404	4
MR (Obs.)	187.69≠	2
MR (Calc.)	186.92	5
(nD-d/2)	1.0490≠	2
Dielectric	2.13	5
A 372 to 526 °C	7.75334	5
B	3240.23	5
C		
A* 372 to 595 °C	2.72652	5
B*	3152.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 225 to 372 °C	2.61602	5
B'*	3095.5	5
Ac t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	588.65	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	183.66	5
BP	0.077	5
t_e	0.03460	5
30 mm	1.1871	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	48.68	5
30 mm	41.7	5
BP	33.1	5
t_e	30.5	5
t_e (d, e)	29.78	5
ΔHv/T_e	19.41	5
d 372 to 585 °C	63.46	5
e	0.0578	5
d' 225 to 372 °C	59.68	5
e'	0.0478	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8446	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.13	5
30	28.20	5
40	27.30	5
Parachor [P] 20°C		
30		
40		
Sugd.	1594.2	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 1

NAME	Methyl fluoride	STRUCTURAL FORMULA
	Fluoromethane	CH_3F
Mole % Pur. / Ref.	Molecular Formula CH_3F	Molecular Weight 34.034

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	-78.35	2
100	-108.68	2
30	-122.19	2
10	-132.50	2
1	-149.60	5
Pressure mm 25°C		
t_e	511.5	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	6.668	5
Dielectric		
A (-122 to -20°C)	7.09761	2
B	740.22	2
C	253.89	2
A* (-122 to -65°C)	1.26539	5
B*	688.81	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (t_c -20 to °C)	7.81764	4
Bc	1113.00	4
Cc	306.57	4
Cryos. consts. A°		
B°		
t_e °C	-85.23	5

Property	Value	Ref.
dt/dP °C/mm 25°C		
BP	0.0238	2
t_e	0.0326	5
30 mm	0.3392	5
ΔHm cal/g		
ΔHv cal/g 25°C		
30 mm	130.76	5
BP	118.46	5
t_e	120.56	5
t_e (d, e)	120.37	5
$\Delta Hv/T_e$	21.83	5
d (-125 to -65 °C)	96.49	5
e	0.2804	5
d' to °C		
e'		
d_c g/ml	0.275	5
v_c ml/g	3.63	5
t_c °C	44.6	3
P_c mm	44080.	3
PV/RT 25°C		
30 mm	1.0000	5
BP	0.9700	5
t_e	0.9782	5
t_c	0.275	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	91.8	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Literature

PURIFICATION: Literature

LITERATURE REFERENCES: 3 Chem. Rev. 52, No. 1, 117 (1953), Kolbe and Lynn; 3' Physia 14, 104 (1948), Nichels and Wassenaar.

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 2

NAME	Perfluoro-n-hexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6F_{14}
Molecular Weight 338.060		$CF_3(CF_2)_4CF_3$

		Ref.
F.P. °C	-87.1	3
F.P. 100%		
B.P. °C 760 mm	57.11	3
100	8.27	5
30	-13.52	5
10	-30.1	5
1	-57.8	5
Pressure mm 25°C	218.9	5
t_e	890.9	5
Density g/ml 20°C	1.6995	3
d^t_4 25	1.6851	4
30	1.6695	3
a	1.7612	4
b	-0.0029	4
Ref. Index n_D 22°C	1.2515	3
25		
30		
"C"		
MR (Obs.)	31.584	4
MR (Calc.)	31.588≠	5
(nD-d/2)	0.4146	4
Dielectric		
A (-14 to 66 °C)	7.12338	4
B	1205.37	4
C	227.0	4
A* (-14 to 65 °C)	2.09419	5
B*	1130.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	61.81	5

		Ref.
dt/dP °C/mm 25°C	0.1045	5
BP	0.03827	5
t_e	0.03573	5
30 mm	0.5473	5
ΔHm cal/g		
ΔHv cal/g 25°C	22.50	5
30 mm	24.14	5
BP	21.00	5
t_e	19.62	5
t_e (d, e)	20.8	5
ΔHv/T_e	19.80	5
d (-14 to 62 °C)	23.53	5
e	0.0444	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9839	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9559	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.4160	3
40	0.3270	3
50	0.2916	3
B^v (10 to 60 °C)	487.4	4
A^v	$\bar{3}$.95674	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	11.92	3
30	10.93	3
40	10.10	3
Parachor [P] 20°C	369.4	4
30	367.9	4
40	365.6	4
Sugd.	364.8#	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 JACS 74, 3771 (1952) Stiles and Cady

≠ atomic ref. index for Fluorine in polyfluoro compounds = 1.22

atomic [P] for Fluorine in polyfluoro compounds = 24.

No. 3

NAME	Perfluoro-2-methylpentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6F_{14} · Molecular Weight 338.060 · $CF_3CF(CF_3)(CF_2)_2CF_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	57.73	3
100	8.30	5
30	-13.69	5
10	-30.5	5
1	-58.3	5
Pressure mm 25°C	216.8	5
t_e	831.	5
Density g/ml 20°C	1.7326	3
d_4^t 25	1.7169	4
30	1.7011	4
a	1.7946	4
b	-0.0031	4
Ref. Index n_D 22°C	1.2564	3
25		
30		
"C"	0.1688	4
MR (Obs.)	31.544	5
MR (Calc.)	31.588≠	2
(nD-d/2)	0.3901	5
Dielectric		
A (-14 to 73 °C)	7.08320	4
B	1198.63	4
C	227.5	4
A* (-14 to 65 °C)	2.02668	5
B*	1118.1	5
K		
c		
t_k / t_x to °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	60.39	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1065	5
BP	0.03878	5
t_e	0.03613	5
30 mm	0.5521	5
ΔHm cal/g		
ΔHv cal/g 25°C	22.43	5
30 mm	23.90	5
BP	21.00	5
t_e	19.36	5
t_e (d,e)	20.89	5
$\Delta Hv/T_e$	19.62	5
d (-14 to 60 °C)	23.34	5
e	0.0406	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9933	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.8954	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.4538	3
30	0.3979	3
50	0.3130	3
B^v (10 to 60 °C)	509.6	4
A^v	$\bar{3}$.91880	4
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	12.12	3
30	11.41	3
40	10.49	3
Parachor [P] 20°C	364.1	4
30	365.2	4
40	364.2	4
Sugd.	364.8	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 JACS 74, 3771 (1952) Stiles and Cady

≠ Atomic ref. index for Fluorine in polyfluoro compounds = 1.22

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 4

NAME	Methyl chloride	STRUCTURAL FORMULA
	Chloromethane	CH_3Cl
Mole % Pur. / Ref.	Molecular Formula CH_3Cl	Molecular Weight 50.491

		Ref.
F.P. °C	-97.720	3'
F.P. 100%		
B.P. °C		
760 mm	-24.22	2
100	-62.91	2
30	-80.03	2
10	-93.05	2
1	-114.58	5
Pressure mm 25°C	4309.7	5
t_e	662.9	5
Density g/ml-24°C	0.997	3[2]
d^t_4 -20	0.990	3[2]
-10	0.973	3[2]
a	0.9576	4
b	-0.0_2184	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	11.685	5
Dielectric		
A -80 to	6.99445	2
B 40 °C	902.45	2
C	243.60	2
A* -90 to	1.24262	5
B* 40 °C	841.23	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 40 to	7.81148	4
Bc t_c °C	1433.6	4
Cc	317.5	4
Cryos. A° consts. B°		
t_e °C	-27.34	4

		Ref.
dt/dP °C/mm		
25°C	0.0081	5
BP	0.0305	5
t_e	0.0340	5
30 mm	0.4292	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.54	5
30 mm	114.01	5
BP	101.30	5
t_e	102.04	5
t_e (d, e)	102.02	5
ΔHv/T_e	20.55	5
d -80 to	95.79	5
e -20 °C	0.2276	5
d' to		
e' °C		
d_c g/ml	0.353	3'
v_c ml/g	2.833	3'
t_c °C	143.1	3
P_c mm	50084.	3
PV/RT		
25°C	0.9073	5
30 mm	1.0000	5
BP	0.9660	5
t_e	0.9692	5
t_c	0.2752	4
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ -20°C		
-10		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	110.4	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES: 3 Chem. Rev. 52, No. 1, 117 (1953), Kolbe and Lynn; 3' Timmermans; 3[2] Lange

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 5

NAME	Methylene chloride	STRUCTURAL FORMULA
	Dichloromethane	CH_2Cl_2

Mole % Pur. 99.81	Ref. 1	Molecular Formula CH_2Cl_2	Molecular Weight 84.940

		Ref.
F.P. °C	-95.14	1
F.P. 100%		
B.P. °C		
760 mm	39.75	1
100	-7.27	1
30	-28.18	4
10	-44.12	4
1	-70.55	5
Pressure mm 25°C	435.86	5
t_e	841.21	5
Density g/ml 20°C	1.32554	1
d^t_4 25	1.31630	1
30	1.30700	4
a	1.36277	4
b	-0.00178	4
Ref. Index n_D 20°C	1.42416	1
25	1.42115	1
55	1.41519	1
"C"	0.4252	4
MR (Obs.)	16.357	4
MR (Calc.)	16.552	5
(nD-d/2)	0.76139	4
Dielectric		
A -28 to	7.07138	1
B 121 °C	1134.6	1
C	231.	5
A* -28 to	1.46352	5
B* 53 °C	1063.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 121 to	7.50819	5
Bc t_c °C	1462.59	5
Cc	278.60	5
Cryos. A°	0.02286	1
consts. B°		
t_e °C	42.63	5

		Ref.
dt/dP °C/mm		
25°C	0.0575	5
BP	0.03692	4
t_e	0.03406	5
30 mm	0.5248	5
ΔHm cal/g	16.89	4
ΔHv cal/g		
25°C	80.55	5
30 mm	89.20	5
BP	78.18	5
t_e	77.74	5
t_e (d, e)	77.71	5
$\Delta Hv/T_e$	20.91	5
d -28 to	84.63	5
e 43 °C	0.1622	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	252.	5
P_c mm	56400.	5
PV/RT		
25°C	0.9727	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9573	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	0.3868	1
40	0.3530	1
60	0.3274	1
80	0.3000	1
B^v 10 to	182.34	4
A^v 50 °C	$\bar{2}$.9656	4
(B^v) 50 to	223.35	4
(A^v) 90 °C	$\bar{2}$.8447	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	28.00	1
γ 30	26.41	1
40	24.84	1
Parachor [P] 20°C	149.4	4
30	149.6	4
40	149.9	4
Sugd.	147.6	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, dist.

PURIFICATION: Dow, dist.

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 6

NAME	Chloroform	STRUCTURAL FORMULA
	Trichloromethane	

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.74	1	$CHCl_3$	119.389

Structural formula:

```
  Cl
  |
ClC H
  |
  Cl
```

		Ref.
F.P. °C	-63.59	1
F.P. 100%		
B.P. °C		
760 mm	61.73	4
100	9.79	5
30	-13.06	5
10	-30.39	5
1	-58.93	5
Pressure mm 25°C	197.4	5
t_e	906.	5
Density g/ml 20°C	1.48316	1
d^t_4 25	1.47985	1
30	1.47650	4
a	1.49652	4
b	-0.0362	4
Ref. Index n_D 20°C	1.44593	1
25	1.44293	1
50	1.42822	1
"C"	0.3984	4
MR (Obs.)	21.46	4
MR (Calc.)	21.419	5
(nD-d/2)	0.70435	4
Dielectric	4.639	1
A (-15 to 135°C)	6.90328	4
B	1163.0	4
C	227.	5
A* (-15 to 90°C)	1.41286	5
B*	1086.	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (135 to t_c °C)	7.3362	5
Bc	1498.	5
Cc	276.	5
Cryos. consts. A°	0.02418	1
B°		
t_e °C	67.32	5

		Ref.
dt/dP °C/mm		
25°C	0.1205	5
BP	0.04107	5
t_e	0.0358	5
30 mm	0.5718	5
ΔHm cal/g	17.62	4
ΔHv cal/g		
25°C	62.11	5
30 mm	65.66	5
BP	57.30	5
t_e	56.68	5
t_e (d, e)	56.68	5
$\Delta Hv/T_e$	19.87	5
d (-13 to 70 °C)	64.20	5
e	0.1118	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	271.	5
P_c mm	39741.	5
PV/RT		
25°C	0.9990	5
30 mm	1.0000	5
BP	0.9610	5
t_e	0.9561	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.3789	1
30	0.3481	1
40	0.3206	1
50	0.2969	1
B^v (10 to 60 °C)	338.5	4
A^v	$\bar{2}.42528$	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	27.10	1
30	25.78	1
40	24.53	1
Parachor [P] 20°C	183.7	4
30	182.2	4
40	180.5	4
Sugd.	184.8	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 7

NAME	Carbon Tetrachloride			STRUCTURAL FORMULA
Mole % Pur. 99.94	Ref. 1	Molecular Formula $C\ Cl_4$	Molecular Weight 153.838	$C\ Cl_4$

		Ref.
F.P. °C		
F.P. 100%	-22.99	1
B.P. °C 760 mm	76.54	1
100	21.81	4
30	-2.31	4
10	-20.62	5
1	-50.82	5
Pressure mm 25°C	115.2	5
t_e	960.	5
Density g/ml 20°C	1.59397	1
d^t_4 25	1.58429	1
30	1.57456	4
a	1.63277	4
b	-0.00190	4
Ref. Index n_D 20°C	1.46005	1
25	1.45704	1
30	1.45409	4
"C"	0.3817	4
MR (Obs.)	26.44	5
MR (Calc.)	26.286	2
(nD-d/2)	0.66306	5
Dielectric		
A -15 to	6.93390	4
B 138 °C	1242.43	4
C	230.0	4
A* -5 to	1.51283	5
B* 100 °C	1155.8	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 138 to	7.3703	5
Bc t_c °C	1584.	5
Cc	277.	5
Cryos. A°	0.00629	1
consts. B°		
t_e °C	84.39	5

		Ref.
dt/dP °C/mm		
25°C	0.1972	5
BP	0.04322	5
t_e	0.0360	5
30 mm	0.6040	5
ΔHm cal/g	5.04	4
ΔHv cal/g 25°C	50.39	5
30 mm	52.31	5
BP	46.41	5
t_e	45.89	5
t_e (d, e)	45.90	5
$\Delta Hv/T_e$	19.74	5
d -5 to	52.14	5
e 90 °C	0.0736	5
d' to		
e' °C		
d_c g/ml	0.5576	3
v_c ml/g	1.7934	3
t_c °C	283.15	3
P_c mm	34200.	3
PV/RT 25°C	0.9973	5
30 mm	1.0000	5
BP	0.9703	5
t_e	0.9645	5
t_c	0.2718	4
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.6091	1
40	0.47364	1
60	0.3825	1
B^v 10 to	493.5	4
A^v 70 °C	$\bar{2}$.10154	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.206	3'
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	26.84	1
γ 30	26.17	1
40	25.51	1
Parachor [P] 20°C	219.7	4
30	221.0	4
40	222.1	4
Sugd.	222.0	5
Exp. L. 1.%/wt. u.		
Dispersion		
Flash Point °C	None	
Fire Point	None	
M. Spec.		1
Ultra V.		1
X-Ray Dif.		
Infrared		1
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, Lit.

PURIFICATION: Distillation, Lit.

LITERATURE REFERENCES: 3 Young; 3' Timmermans

No. 8

NAME	Methylene bromochloride / Bromochloromethane	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula CH_2ClBr; Molecular Weight 129.399	CH_2ClBr

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	68.11	4
100	16.69	5
30	-5.89	5
10	-22.98	5
1	-51.09	5
Pressure mm 25°C	147.2	5
t_e	925.	5
Density g/ml 20°C	1.93439	1
d^t_4 25	1.92292	1
30	1.91143	4
a	1.98028	4
b	-0.00225	4
Ref. Index n_D 20°C	1.48376	1
25	1.48076	1
30	1.47761	4
"C"	0.3297	4
MR (Obs.)	19.13	4
MR (Calc.)	19.450	5
(nD-d/2)	0.51657	4
Dielectric		
A (-6 to 297 °C)	6.86624	4
B	1132.3	4
C	216.	4
A* (-6 to 84 °C)	1.41396	5
B*	1060.4	5
K		
c		
t_k to / t_x °C		
A' / B' to °C / C'		
A'* to / B'* °C		
Ac / Bc / Cc to t_c °C		
Cryos. consts. A° / B°		
t_e °C	74.32	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1514	5
BP	0.04074	5
t_e	0.0350	5
30 mm	0.5644	5
ΔHm cal/g		
ΔHv cal/g 25°C	60.68	5
30 mm	64.81	5
BP	55.43	5
t_e	54.69	5
t_e (d, e)	54.64	5
ΔHv/T_e	20.36	5
d (-6 to 74 °C)	64.06	5
e	0.1267	5
d' / e' to °C		
d_c g/ml	0.625	5
v_c ml/g	1.60	5
t_c °C	297.	5
P_c mm	45600.	5
PV/RT 25°C	0.9919	5
30 mm	1.0000	5
BP	0.9618	5
t_e	0.9563	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.3486	1
40	0.2949	1
60	0.2569	1
B^v (10 to 70 °C)	323.8	4
A^v	$\bar{2}$.43796	4
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f / g / h to °K		
f' / g' / h' to °K		
m / n / o to °K		
m' / n' / o' to °K		
Surface tension dynes/cm. γ 20°C	33.32	1
30	31.87	1
40	30.39	1
Parachor [P] 20°C	160.7	4
30	160.9	4
40	161.3	4
Sugd.	161.3	5
Exp. L.1.%/wt. / u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 9

NAME	Bromotrichloromethane	STRUCTURAL FORMULA
		CCl_3Br

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.94	1	CCl_3Br	198.297

		Ref.
F.P. °C	-5.65	1
F.P. 100%		
B.P. °C 760 mm	104.70	1
100	45.93	1
30	20.13	4
10	0.60	4
1	-31.53	5
Pressure mm 25°C	38.40	5
t_e	1027.13	5
Density g/ml 20°C	2.01221	1
d_4^t 25	2.00130	1
30	1.99037	4
a	2.05583	4
b	-0.00216	4
Ref. Index n_D 20°C	1.50633	1
25	1.50342	1
50	1.48903	1
"C"	0.3308	4
MR (Obs.)	29.294	4
MR (Calc.)	29.184	5
(nD-d/2)	0.50023	4
Dielectric		
A 20 to 170 °C	6.86625	1
B	1294.08	1
C	220.	5
A* 20 to 126 °C	1.55053	5
B*	1209.8	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to B'* °C		
Ac 170 to t_c °C	7.29174	5
Bc	1647.18	5
Cc	269.99	5
Cryos. consts. A°	0.00426	1
B°		
t_e °C	115.72	5

		Ref.
dt/dP °C/mm 25°C	0.5246	5
BP	0.04655	4
t_e	0.03682	5
30 mm	0.6450	5
ΔHm cal/g	3.05	4
ΔHv cal/g 25°C	44.21	5
30 mm	44.56	5
BP	38.61	5
t_e	37.86	5
t_e (d, e)	37.84	5
ΔHv/T_e	19.30	5
d 20 to 116 °C	45.97	5
e	0.0703	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	318.	5
P_c mm	30812.	5
PV/RT 25°C	0.9996	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9492	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.8138	1
40	0.6091	1
60	0.4788	1
80	0.3893	1
B^v 10 to 50 °C	577.74	4
A^v	$\bar{3}$.9400	4
(B^v) 50 to 90 °C	528.82	4
(A^v)	$\bar{2}$.0931	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	31.26	1
30	29.98	1
40	28.72	1
Parachor [P] 20°C	233.0	4
30	233.2	4
40	233.3	4
Sugd.	235.7	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, dist.

PURIFICATION: Dow, dist.

LITERATURE REFERENCES:

No. 10

NAME	Methyl bromide	STRUCTURAL FORMULA
	Bromomethane	CH_3Br
Mole % Pur. 99.71; Ref. 1	Molecular Formula CH_3Br; Molecular Weight 94.950	

Property	Value	Ref.
F.P. °C	-94.07	1
F.P. 100%		
B.P. °C 760 mm	+3.56	2
100	-39.40	2
30	-58.37	2
10	-72.78	2
1	-96.56	5
Pressure mm 25°C	1633.0	5
t_e	739.7	5
Density g/ml -10°C	1.73676	1
d_4^t -5	1.74566	1
30		
a	1.73676	4
b	-0.002411	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	14.583	5
(nD-d/2)		
Dielectric		
A -58 to 53 °C	6.95965	2
B	986.59	2
C	238.32	2
A* -58 to 13 °C	1.44534	5
B*	920.93	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°	0.02120	1
B°		
t_e °C	2.86	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0187	5
BP	0.0339	5
t_e	0.0346	5
30 mm	0.4752	5
ΔHm cal/g		
ΔHv cal/g 25°C	56.99	5
30 mm	67.72	5
BP	59.74	5
t_e	59.83	5
t_e (d, e)	59.57	5
$\Delta Hv/T_e$	20.49	5
d -58 to 3 °C	60.20	5
e	0.1289	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	194.0	3'
P_c mm		
PV/RT 25°C	0.9399	5
30 mm	1.0000	5
BP	0.9625	5
t_e	0.9632	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η -30 °C	0.2834	1
-20	0.2575	1
-10	0.2356	1
0	0.2174	1
B^v -40 to -10 °C	256.30	4
A^v	$\bar{2}$.3985	4
(B^v) -10 to 10°C	251.07	4
(A^v)	$\bar{2}$.4183	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. -10°C γ -		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	124.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, Lit.

PURIFICATION: Dow, dist.

LITERATURE REFERENCES: 3 Timmermans; 3' Kirk and Othmer, Encyc. of Chemical Technology 2, 651 (1948)

No. 11

NAME	Ethyl chloride / Chloroethane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_2H_5Cl — Molecular Weight 64.517
		CH_2ClCH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	+12.27	2
100	-32.03	2
30	-51.59	2
10	-66.43	2
1	-90.93	5
Pressure mm 25°C	1199.0	4
t_e	764.2	5
Density g/ml 0°C	0.92390	3
d_4^t 10	0.90280	3
25	0.87062	4
a	0.92572	4
b	-0.00203	4
Ref. Index n_D 0°C	1.3790	3
10	1.3738	4
30		
"C"	0.5486	4
MR (Obs.)	16.137	4
MR (Calc.)	16.303	5
(nD-d/2)	0.8171	4
Dielectric		
A (-50 to 70 °C)	6.94914	2
B	1012.77	2
C	236.67	2
A* (-50 to 40 °C)	1.25525	5
B*	945.56	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (70 to t_c °C)		
Bc		
Cc	250.	5
Cryos. consts. A°		
B°		
t_e °C	12.42	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	0.0245	5
BP	0.0350	5
t_e	0.0348	5
30 mm	0.4896	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.07	5
30 mm	102.92	5
BP	90.55	5
t_e	90.52	5
t_e (d, e)	90.40	5
ΔHv/T_e	20.49	5
d (-52 to 15 °C)	92.92	5
e	0.1938	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	0.9492	5
30 mm	1.0000	5
BP	0.9620	5
t_e	0.9618	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 5 °C	0.3196	3
10	0.3090	3
B^v (-5 to 20 °C)	230.8	4
A^v	$\bar{2}$.67499	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 5°C	21.20	3
10	20.64	3
40		
Parachor [P] 5°C	151.2	4
10	152.3	4
40		
Sugd.	149.4	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Literature

PURIFICATION: Literature

LITERATURE REFERENCES: 3 Timmermans

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 12

NAME	1,2-Dichloroethane			STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 1	Molecular Formula $C_2H_4Cl_2$	Molecular Weight 98.966	CH_2ClCH_2Cl

		Ref.
F.P. °C	-35.66	1
F.P. 100%		
B.P. °C 760 mm	83.47	1
100	29.83	4
30	5.83	5
10	-12.54	5
1	-43.11	5
Pressure mm 25°C	80.3	5
t_e	963.	5
Density g/ml 20°C	1.25309	1
d^t_4 25	1.24579	1
30	1.23847	1
a	1.28209	4
b	-0.00143	4
Ref. Index n_D 20°C	1.44476	1
25	1.44210	1
30	1.43929	4
"C"	0.4704	4
MR (Obs.)	21.01	4
MR (Calc.)	21.170	5
(nD-d/2)	0.81821	4
Dielectric	10.19	1
A (6 to 161 °C)	7.18431	4
B	1358.5	4
C	232.	4
A* (6 to 102 °C)	1.58516	5
B*	1274.2	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (161 to t_c °C)	7.6284	5
Bc	1730.	5
Cc	283.	5
Cryos. consts. A°	0.01770	1
B°		
t_e °C	91.19	5

		Ref.
dt/dP °C/mm 25°C	0.2647	5
BP	0.04192	5
t_e	0.0342	5
30 mm	0.6038	5
ΔHm cal/g	20.03	4
ΔHv cal/g 25°C	83.92	5
30 mm	86.31	5
BP	76.38	5
t_e	76.88	5
t_e (d, e)	75.40	5
$\Delta Hv/T_e$	20.88	5
d (6 to 92 °C)	87.06	5
e	0.1279	5
d' to °C		
e'		
d_c g/ml	0.517	5
v_c ml/g	1.935	5
t_c °C	306.	5
P_c mm	49035.	5
PV/RT 25°C	0.9994	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9499	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.6671	1
40	0.5287	1
60	0.4337	1
70	0.3982	1
B^v (10 to 80 °C)	441.1	4
A^v	$\bar{2}$.31484	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	32.48	1
30	31.06	1
40	28.27	5
Parachor [P] 20°C	188.5	4
30	188.6	4
40		
Sugd.	186.6	5
Exp. L.l.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 13

NAME	1,1,2-Trichloroethane	STRUCTURAL FORMULA
Mole % Pur. 99.90 (Ref. 1)	Molecular Formula $C_2H_3Cl_3$; Molecular Weight 133.415	$CHCl_2CH_2Cl$

Property	Value	Ref.
F.P. °C	-36.59	1
F.P. 100%		
B.P. °C 760 mm	113.77	1
100	55.78	4
30	30.36	5
10	11.04	5
1	-20.5	5
Pressure mm 25°C	22.49	5
t_e	1055.5	5
Density g/ml 20°C	1.43968	1
d_4^t 25	1.43194	1
30	1.42420	4
a	1.47061	4
b	-0.00154	4
Ref. Index n_D 20°C	1.47124	1
25	1.46868	1
30	1.46600	4
"C"	0.4323	4
MR (Obs.)	25.91	5
MR (Calc.)	26.037	2
(nD-d/2)	0.75140	5
Dielectric	7.116	1
A (30 to 186 °C)	6.84165	4
B	1262.6	4
C	205.	4
A* (30 to 136 °C)	1.35368	5
B*	1183.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (186 to t_c °C)	7.2567	5
Bc	1599.	5
Cc	254.	5
Cryos. consts. A°	0.02484	1
B°		
t_e °C	125.68	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8090	5
BP	0.0458	5
t_e	0.0356	5
30 mm	0.6349	5
ΔHm cal/g	20.68	4
ΔHv cal/g 25°C	72.75	5
30 mm	72.06	5
BP	61.33	5
t_e	59.70	5
t_e (d, e)	59.8	5
ΔHv/T_e	19.97	5
d (25 to 126 °C)	75.96	5
e	0.1286	5
d' to °C		
e'		
d_c g/ml	0.497	4
v_c ml/g	2.012	4
t_c °C	339.	5
P_c mm	36263.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9603	5
t_e	0.9511	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.82145	1
40	0.63307	1
60	0.50894	1
80	0.42113	1
B^v (10 to 90 °C)	489.6	4
A^v	$\bar{2}$.23823	4
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	33.61	1
30	32.24	1
40	30.84	1
Parachor [P] 20°C	223.1	4
30	223.2	4
40	223.1	4
Sugd.	223.8	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_C$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 14

NAME	Methyl chloroform	STRUCTURAL FORMULA
		CH_3CCl_3

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.92	1	$C_2H_3Cl_3$	133.425

Property	Value	Ref.
F.P. °C	-30.41	1
F.P. 100%		
B.P. °C 760 mm	74.096	1
100	20.35	1
30	-3.301	4
10	-21.22	4
1	-50.75	5
Pressure mm 25°C	123.37	5
t_e	925.86	5
Density g/ml 20°C	1.33899	1
d^t_4 25	1.33063	1
30	1.32224	1
a	1.37247	4
b	-0.00164	4
Ref. Index n_D 20°C	1.43789	1
25	1.43519	1
50	1.42165	1
"C"	0.4338	4
MR (Obs.)	26.152	4
MR (Calc.)	26.037	5
(nD-d/2)	0.7684	4
Dielectric		
A (-3 to 131 °C)	6.90160	1
B	1202.60	1
C	225.	5
A* (-3 to 91 °C)	1.46948	5
B*	1129.16	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (131 to t_c °C)	7.32705	5
Bc	1524.70	5
Cc	269.86	5
Cryos. consts. A°	0.00558	1
B°		
t_e °C	80.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1829	5
BP	0.04250	4
t_e	0.03643	5
30 mm	0.5916	5
ΔHm cal/g	4.90	4
ΔHv cal/g 25°C	57.86	5
30 mm	61.12	5
BP	52.44	5
t_e	51.74	5
t_e (d, e)	51.71	5
$\Delta Hv/T_e$	19.51	5
d (-3 to 81 °C)	60.75	5
e	0.1122	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	266.	5
P_c mm	30274.	5
PV/RT 25°C	0.9867	5
30 mm	1.0000	5
BP	0.9467	5
t_e	0.9405	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.6282	1
40	0.4899	1
60	0.3962	1
80	0.3612	1
B^v (10 to 50 °C)	495.84	4
A^v	$\bar{2}$.1070	4
(B^v) (50 to 90 °C)	236.35	4
(A^v)	$\bar{2}$.8886	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.39	1
30	24.11	1
40	22.87	1
Parachor [P] 20°C	223.7	4
30	223.8	4
40	223.9	4
Sugd.	223.8	5
Exp. L. 1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, dist.

PURIFICATION: Dow, dist.

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 15

NAME	sec. Butylbromide			STRUCTURAL FORMULA
Mole % Pur. 99.56	Ref. 1	Molecular Formula C_4H_9Br	Molecular Weight 137.028	$CH_3CH_2CHCH_3$ (Br on CH)

Property	Value	Ref.
F.P. °C	-112.65	1
F.P. 100%		
B.P. °C 760 mm	91.44	4
100	34.61	5
30	9.73	5
10	-9.08	5
1	-39.97	5
Pressure mm 25°C	64.65	5
t_e	989.	5
Density g/ml 20°C	1.26085	1
d_4^t 25	1.25354	1
30	1.24624	4
a	1.29004	4
b	-0.00144	4
Ref. Index n_D 20°C	1.43705	1
25	1.43453	1
50	1.42079	1
"C"	0.4598	4
MR (Obs.)	28.48	4
MR (Calc.)	28.437	5
(nD-d/2)	0.80662	4
Dielectric		
A 10 to 146 °C	6.82724	4
B	1229.08	4
C	220.	4
A* 10 to 110 °C	1.36870	5
B*	1149.0	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 146 to t_c °C	7.2470	5
Bc	1556.	5
Cc	266.	5
Cryos. consts. A°	0.03217	1
B°		
t_e °C	100.72	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3281	5
BP	0.04510	5
t_e	0.0368	5
30 mm	0.6216	5
ΔHm cal/g	12.01	4
ΔHv cal/g 25°C	60.64	5
30 mm	62.25	5
BP	53.67	5
t_e	52.73	5
t_e (d, e)	52.70	5
$\Delta Hv/T_e$	19.32	5
d 10 to 100 °C	63.27	5
e	0.1050	5
d' to °C		
e'		
d_c g/ml	0.412	5
v_c ml/g	2.425	5
t_c °C	286.	5
P_c mm	26756.	5
PV/RT 25°C	0.9978	5
30 mm	1.0000	5
BP	0.9579	5
t_e	0.9507	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.4692	1
40	0.3884	1
60	0.3293	1
80	0.2843	1
B^v 10 to 90 °C	374.6	4
A^v	$\bar{2}$.39320	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	25.01	1
30	23.90	1
40	22.82	1
Parachor [P] 20°C	243.0	4
30	243.1	4
40	243.0	4
Sugd.	241.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 16

NAME	1, 2-Dibromo-1, 1-dichloroethane		STRUCTURAL FORMULA
Mole % Pur. 99.97	Ref. 1	Molecular Formula $C_2H_2Cl_2Br_2$ / Molecular Weight 256.782	CH_2BrCCl_2Br

Property	Value	Ref.
F.P. °C	-66.85	1
F.P. 100%		
B.P. °C 760 mm	178.30	1
100	111.28	4
30	81.54	4
10	58.79	4
1	20.64	5
Pressure mm 25°C	1.3482	5
t_e	1246.14	5
Density g/ml 20°C	2.26216	1
d_4^t 25	2.25230	1
30	2.24244	4
a	2.30159	4
b	-0.00197	4
Ref. Index n_D 20°C	1.55666	1
25	1.55400	1
35	1.54889	1
"C"	0.3215	4
MR (Obs.)	36.523	4
MR (Calc.)	36.700	5
(nD-d/2)	0.42558	4
Dielectric		
A (81 to 246 °C)	7.03778	4
B	1593.35	4
C	205.	5
A* (81 to 209 °C)	1.75459	5
B*	1493.7	5
K		
c		
t_k to t_x °C		
A' (25 to 81 °C)		
B'		
C'		
A'* to		
B'* °C		
Ac (t_c °C)	7.45239	5
Bc	1989.74	5
Cc	258.0	5
Cryos. consts. A°	0.01439	1
B°		
t_e °C	199.18	5

Property	Value	Ref.
dt/dP °C/mm 25°C	11.0081	5
BP	0.05269	4
t_e	0.03573	5
30 mm	0.7460	5
ΔHm cal/g	4.73	4
ΔHv cal/g 25°C	46.37	5
30 mm	43.51	5
BP	37.75	5
t_e	36.55	5
t_e (d, e)	36.50	5
ΔHv/T_e	19.87	5
d (81 to 199 °C)	48.38	5
e	0.0596	5
d' (25 to 81 °C)	47.63	5
e'	0.0504	5
d_c g/ml		
v_c ml/g		
t_c °C	420.	5
P_c mm	32870.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9617	5
t_e	0.9482	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	1.4680	1
40	1.0399	1
60	0.7852	1
80	0.6209	1
B^v (10 to 50 °C)	687.51	4
A^v	$\bar{3}$.8219	4
(B^v) (50 to 90 °C)	599.96	4
(A^v)	$\bar{2}$.0944	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	39.12	1
30	37.92	1
40	36.83	1
Parachor [P] 20°C	283.9	4
30	284.2	4
40	284.6	4
Sugd.	288.4	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, dist.

PURIFICATION: Dow, dist.

LITERATURE REFERENCES:

No. 17

NAME	Ethyl bromide		STRUCTURAL FORMULA
	Bromoethane		
Mole % Pur. 99.87	Ref. 1	Molecular Formula C_2H_5Br	Molecular Weight 108.976
			C_2H_5Br

Property	Value	Ref.
F.P. °C	-119.33	1
F.P. 100%		
B.P. °C 760 mm	38.35	2
100	-10.00	2
30	-31.30	2
10	-47.45	2
1	-74.08	5
Pressure mm 25°C	468.60	5
t_e	837.3	5
Density g/ml 20°C	1.45939	1
d^t_4 25	1.44917	1
30	1.43889	4
a	1.50075	4
b	-0.00195	4
Ref. Index n_D 20°C	1.42416	1
25	1.42104	1
30	1.41776	4
"C"	0.3862	4
MR (Obs.)	19.060	4
MR (Calc.)	19.201	5
(nD-d/2)	0.6945	4
Dielectric	9.112	1
A -32 to	6.91995	2
B 110 °C	1090.81	2
C	231.71	2
A* -32 to	1.42140	5
B* 51 °C	1019.18	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 110 to	7.59098	5
Bc t_c °C	1545.3	5
Cc	290.0	5
Cryos. A°		
consts. B°		
t_e °C	41.19	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0560	5
BP	0.0382	5
t_e	0.0354	5
30 mm	0.5330	5
ΔHm cal/g		
ΔHv cal/g 25°C	59.91	5
30 mm	66.69	5
BP	58.32	5
t_e	57.98	5
t_e (d, e)	57.73	5
ΔHv/T_e	20.01	5
d -32 to	62.93	5
e 41 °C	0.1203	5
d' to		
e' °C		
d_c g/ml	0.507	3
v_c ml/g	1.9724	3
t_c °C	230.7	3
P_c mm	42000.	3
PV/RT 25°C	0.9716	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9574	5
t_c	0.2873	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 0 °C	0.3191	1
10	0.2914	1
20	0.2690	1
30	0.2503	1
B^v -10 to	291.22	4
A^v 40 °C	$\bar{2}$.43797	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	23.70	1
γ 30	22.46	1
40	21.45	5
Parachor [P] 20°C	165.1	4
30	165.3	4
40		
Sugd.	163.1	5
Exp. L. l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, literature

PURIFICATION: Distillation, literature

LITERATURE REFERENCES: 3 Chem. Rev. 52, No. 1, 117 (1953) Kolbe and Lynn

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 18

NAME	1, 2-Dibromoethane
	Ethylenedibromide

STRUCTURAL FORMULA

CH_2BrCH_2Br

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.91	1	$C_2H_4Br_2$	187.884

Property	Value	Ref.
F.P. °C	9.79	1
F.P. 100%	9.85	4
B.P. °C 760 mm	131.36	1
100	70.21	4
30	43.04	5
10	22.22	5
1	-12.74	5
Pressure mm 25°C	11.70	5
t_e	1112.	5
Density g/ml 20°C	2.17920	1
d^t_4 25	2.16877	1
30	2.15833	4
a	2.22090	4
b	-0.00208	4
Ref. Index n_D 20°C	1.53868	1
25	1.53603	1
30	1.53317	4
"C"	0.3237	4
MR (Obs.)	27.00	4
MR (Calc.)	26.966	5
(nD-d/2)	0.44908	4
Dielectric	4.771	1
A (43 to 215 °C)	7.06245	4
B	1469.7	4
C	220.	4
A* (43 to 156 °C)	1.67853	5
B*	1374.2	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (215 to t_c °C)	7.4959	5
Bc	1871.	5
Cc	276.	5
Cryos. consts. A°	0.01508	1
B°		
t_e °C	145.84	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.5320	5
BP	0.04803	5
t_e	0.0356	5
30 mm	0.6820	5
ΔHm cal/g	12.76	4
ΔHv cal/g 25°C	52.48	5
30 mm	51.70	5
BP	45.6	5
t_e	44.58	5
t_e (d, e)	44.60	5
$\Delta Hv/T_e$	19.99	5
d (43 to 146 °C)	54.67	5
e	0.0690	5
d' (25 to 43 °C)	53.58	5
e'	0.0438	5
d_c g/ml	0.776	5
v_c ml/g	1.288	5
t_c °C	377.	5
P_c mm	42731.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9645	5
t_e	0.9541	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.79558	1
40	0.60455	1
60	0.48166	1
80	0.39768	1
B^v (10 to 90 °C)	503.1	4
A^v	$\bar{2}$.17512	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	38.51	1
30	37.22	1
40	35.13	5
Parachor [P] 20°C	214.8	4
30	215.0	4
40		
Sugd.	214.0	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in	0.071	1

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 19

NAME	1,1,2-Tribromoethane	STRUCTURAL FORMULA
Mole % Pur. 99.96 (Ref. 1)	Molecular Formula $C_2H_3Br_3$; Molecular Weight 266.792	Br Br / BrCHCH$_2$

Property	Value	Ref.
F.P. °C	-29.21	1
F.P. 100%	-29.19	4
B.P. °C 760 mm	188.93	1
100	120.43	4
30	90.21	5
10	67.16	5
1	28.62	5
Pressure mm 25°C	0.7751	5
t_e	1263.	5
Density g/ml 20°C	2.62111	1
d^t_4 25	2.61007	1
30	2.59903	4
a	2.66526	4
b	-0.00221	4
Ref. Index n_D 20°C	1.59336	1
25	1.59076	1
30	1.58797	4
"C"	0.2945	4
MR (Obs.)	34.51	4
MR (Calc.)	34.731	5
(nD-d/2)	0.28278	4
Dielectric	5.609	1
A 90 to 270 °C	6.94373	4
B	1562.12	4
C	196.	4
A* 90 to 221 °C	1.68974	5
B*	1469.3	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 270 to t_c °C	7.3511	5
Bc	1964.	5
Cc	252.	5
Cryos. consts. A°	0.01843	1
B°		
t_e °C	211.00	5

Property	Value	Ref.
dt/dP °C/mm 25°C	18.078	5
BP	0.05408	5
t_e	0.0364	5
30 mm	0.7567	5
ΔHm cal/g	8.1637	4
ΔHv cal/g 25°C	47.27	5
30 mm	43.33	5
BP	36.76	5
t_e	35.43	5
t_e (d, e)	35.29	5
ΔHv/T_e	19.52	5
d 90 to 211 °C	49.33	5
e	0.0665	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	451.	5
P_c mm	35925.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9529	5
t_e	0.9373	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	1.4784	1
40	1.0190	1
60	0.7616	1
80	0.5984	1
B^v 10 to 90 °C	639.3	4
A^v	$\bar{3}$.96698	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	44.36	1
30	43.12	1
40	41.68	1
Parachor [P] 20°C	262.7	4
30	263.0	4
40	263.1	4
Sugd.	264.9	5
Exp. L. l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 20

NAME	Isopropyl chloride	STRUCTURAL FORMULA
	2-Chloropropane	$(CH_3)_2CHCl$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.90	1	C_3H_7Cl	78.543

Property	Value	Ref.
F.P. °C	-117.18	1
F.P. 100%	-117.15	1
B.P. °C 760 mm	34.8	4
100	-12.17	4
30	-32.93	4
10	-48.69	5
1	-74.72	5
Pressure mm 25°C	529.5	5
t_e	827.2	5
Density g/ml 20°C	0.86257	1
d^t_4 25	0.85599	1
30	0.84936	4
a	0.88926	4
b	-0.00124	4
Ref. Index n_D 20°C	1.37759	1
25	1.37464	1
30	1.37149	4
"C"	0.5855	4
MR (Obs.)	20.973	4
MR (Calc.)	20.921	5
(nD-d/2)	0.94630	4
Dielectric	9.52	1
A (-32 to 90 °C)	6.96540	5
B	1081.6	5
C	230.	5
A* (-32 to 47 °C)	1.33241	5
B*	1012.14	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (90 to t_c °C)	7.39133	5
Bc	1372.3	5
Cc	270.6	5
Cryos. consts. A°	0.03661	1
B°		
t_e °C	37.21	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.04931	5
BP	0.03704	4
t_e	0.03466	5
30 mm	0.5198	4
ΔHm cal/g	22.48	4
ΔHv cal/g 25°C	83.27	5
30 mm	93.66	5
BP	81.53	5
t_e	81.11	5
t_e (d, e)	81.10	5
$\Delta Hv/T_e$	20.52	5
d (-32 to 40 °C)	87.76	5
e	0.1791	5
d' to		
e' °C		
d_c g/ml	0.341	5
v_c ml/g	2.934	5
t_c °C	212.	5
P_c mm	35451.	5
PV/RT 25°C	0.9690	5
30 mm	1.0000	5
BP	0.9601	5
t_e	0.9578	5
t_c	0.27	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 0 °C	0.4499	1
10	0.4079	1
20	0.3724	1
30	0.3410	1
B^v (0 to 40 °C)	334.0	4
A^v	$\bar{2}$.43017	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	18.16	5
30	17.01	5
40	15.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	188.4	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 21

NAME	Propylene dichloride		STRUCTURAL FORMULA
	1, 2-Dichloropropane		$CH_3CHClCH_2Cl$
Mole % Pur. 99.76	Ref. 1	Molecular Formula $C_3H_6Cl_2$	Molecular Weight 112.992

		Ref.
F.P. °C	-100.53	1
F.P. 100%	-100.44.	4
B.P. °C 760 mm	96.37	1
100	40.05	1
30	15.18	4
10	-3.7	5
1	-35.0 ?	5
Pressure mm 25°C	49.67	4
t_e	1003.0	5
Density g/ml 20°C	1.15597	1
d^t_4 25	1.14936	1
30	1.14273	4
a	1.18241	4
b	-0.00131	4
Ref. Index n_D 20°C	1.43937	1
25	1.43679	1
30	1.42389	1
"C"	0.5041	4
MR (Obs.)	25.725	4
MR (Calc.)	25.788	5
(nD-d/2)	0.86138	4
Dielectric	8.96	1
A 15 to	6.96395	4
B 160 °C	1295.9	4
C	221.	5
A* 15 to	1.41927	5
B* 115 °C	1214.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 160 to	7.35053	5
Bc t_c °C	1610.6	5
Cc	265.2	5
Cryos. A° consts.	0.02592	1
B°		
t_e °C	106.03	5

		Ref.
dt/dP °C/mm 25°C	0.4082	4
BP	0.04442	4
t_e	0.03573	5
30 mm	0.6231	4
ΔHm cal/g	13.53	4
ΔHv cal/g 25°C	77.00	5
30 mm	78.23	5
BP	67.70	5
t_e	66.76	5
t_e (d, e)	66.45	5
ΔHv/T_e	19.89	5
d 15 to	80.17	5
e 110 °C	0.1294	5
d' to		
e' °C		
d_c g/ml	0.41	5
v_c ml/g	2.44	5
t_c °C	304.3	5
P_c mm	33300.	5
PV/RT 25°C	0.9978	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9506	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.7415	1
40	0.5830	1
60	0.4747	1
80	0.3978	1
B^v 10 to	459.1	4
A^v 90 °C	$\bar{2}$.29983	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.65	1
30	27.37	1
40	26.15	1
Parachor [P] 20°C	226.2	4
30	226.2	4
40	226.3	4
Sugd.	225.6	5
Exp. L. 1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	0.275	1
Water in	0.132	1

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow, Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 22

NAME	Trimethylene chloro bromide	STRUCTURAL FORMULA
Mole % Pur. 99.79 (Ref. 1)	Molecular Formula C_3H_6ClBr; Molecular Weight 157.451	$CH_2ClCH_2CH_2Br$

Property	Value	Ref.
F.P. °C	-58.87	1
F.P. 100%		
B.P. °C 760 mm	143.36	1
100	81.16	1
30	53.57	4
10	32.4	5
1	-3.0	5
Pressure mm 25°C	6.495	5
t_e	1127.0	5
Density g/ml 20°C	1.59694	1
d^t_4 25	1.58925	1
30		
a	1.62775	4
b	-0.0$_3$154	4
Ref. Index n_D 20°C	1.48635	1
25	1.48414	1
30	1.47260	1
"C"	0.4014	4
MR (Obs.)	28.325	4
MR (Calc.)	28.686	5
(nD-d/2)	0.68788	4
Dielectric	25° 9.431	1
A 53 to 215 °C	7.03215	1
B	1475.23	1
C	212.	1
A* 53 to 175 °C	1.59125	5
B*	1387.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 215 to t_c °C	7.32546	5
Bc	1760.2	5
Cc	252.	5
Cryos. consts. A°	0.02418	1
B°		
t_e °C	158.64	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.582	5
BP	0.04891	4
t_e	0.0359	5
30 mm	0.6921	4
ΔHm cal/g	14.00	4
ΔHv cal/g 25°C	66.92	5
30 mm	64.89	5
BP	55.78	5
t_e	54.29	5
t_e (d, e)	54.23	5
ΔHv/T_e	19.79	5
d 53 to 165 °C	70.32	5
e	0.1014	5
d' to °C		
e'		
d_c g/ml	0.522	5
v_c ml/g	1.914	5
t_c °C	379.2	5
P_c mm	36000.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9380	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.9148	1
40	0.7042	1
60	0.5659	1
80	0.4685	1
B^v 10 to 90 °C	489.5	4
A^v	$\bar{2}$.28480	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	36.11	1
30	34.81	1
40	33.72	1
Parachor [P] 20°C	241.7	4
30	241.8	4
40	242.3	4
Sugd.	239.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	1.84	1
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow, Distillation

LITERATURE REFERENCES:

No. 23

NAME	1,3-Dibromopropane	STRUCTURAL FORMULA
	Trimethylene dibromide	$Br(CH_2)_3Br$
Mole % Pur. 99.89 (Ref. 1)	Molecular Formula $C_3H_6Br_2$ — Molecular Weight 201.910	

Property	Value	Ref.
F.P. °C	-34.20	1
F.P. 100%		
B.P. °C 760 mm	166.67	1
100	100.82	4
30	71.32	5
10	48.64	5
1	10.41	5
Pressure mm 25°C	2.604	5
t_e	1206.5	5
Density g/ml 20°C	1.98009	1
d^t_4 25	1.97119	1
30	1.96229	4
a	2.01568	4
b	-0.00178	4
Ref. Index n_D 20°C	1.52318	1
25	1.52075	1
30	1.51807	4
"C"	0.3467	4
MR (Obs.)	31.16	4
MR (Calc.)	31.158	5
(nD-d/2)	0.53314	4
Dielectric		
A (71 to 242 °C)	7.19874	4
B	1678.3	4
C	222.	4
A* (71 to 196 °C)	1.81483	5
B*	1473.6	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (242 to t_c °C)	7.6370	5
Bc	2110.	5
Cc	278.	5
Cryos. consts. A°	0.02865	1
B°		
t_e °C	185.62	5

Property	Value	Ref.
dt/dP °C/mm 25°C	6.1946	5
BP	0.05144	5
t_e	0.0356	5
30 mm	0.7421	5
ΔHm cal/g	16.10	4
ΔHv cal/g 25°C	54.25	5
30 mm	52.47	5
BP	46.52	5
t_e	45.30	5
t_e (d, e)	45.34	5
$\Delta Hv/T_e$	19.93	5
d (71 to 186 °C)	56.92	5
e	0.0624	5
d' e' to °C		
d_c g/ml	0.732	5
v_c ml/g	1.367	5
t_c °C	414.	5
P_c mm	38811.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9583	5
t_e	0.9451	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	1.0431	1
40	0.7838	1
60	0.6192	1
80	0.5068	1
B^v (10 to 90 °C)	523.7	4
A^v	$\bar{2}$.22212	4
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	39.93	1
30	38.60	1
40	37.34	1
Parachor [P] 20°C	256.3	4
30	256.5	4
40	257.5	4
Sugd.	253.0	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 24

NAME	Propylene dibromide	STRUCTURAL FORMULA
	1,2-Dibromopropane	$CH_2Br\,CHBr\,CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
99.86	1	$C_3H_6Br_2$	201.910

Property	Value	Ref.
F.P. °C	-55.50	1
F.P. 100%		
B.P. °C 760 mm	141.99	4
100	78.24	5
30	50.21	5
10	28.86	5
1	-6.78	5
Pressure mm 25°C	8.0368	5
t_e	1128.	5
Density g/ml 20°C	1.93268	1
d^t_4 25	1.92344	1
30	1.91419	4
a	1.96962	4
b	-0.00184	4
Ref. Index n_D 20°C	1.52004	1
25	1.51737	1
50	1.50420	1
"C"	0.3532	4
MR (Obs.)	31.76	4
MR (Calc.)	31.584	5
(nD-d/2)	0.55370	4
Dielectric	4.369	1
A (50 to 210 °C)	6.89105	4
B	1419.6	4
C	212.	5
A* (50 to 168 °C)	1.55314	5
B*	1330.9	5
K		
c		
t_k to t_x °C		
A' (25 to 50 °C)		
B'		
C'		
A'* to		
B'* °C		
Ac (210 to t_c °C)	7.3109	5
Bc	1796.	5
Cc	265.	5
Cryos. consts. A°	0.02272	1
B°		
t_e °C	157.85	5

Property	Value	Ref.
dt/dP °C/mm 25°C	2.167	5
BP	0.05044	5
t_e	0.0371	5
30 mm	0.7011	5
ΔHm cal/g	10.58	4
ΔHv cal/g 25°C	50.24	5
30 mm	48.94	5
BP	42.04	5
t_e	40.90	5
t_e (d, e)	40.85	5
$\Delta Hv/T_e$	19.16	5
d (50 to 158 °C)	52.72	5
e	0.0752	5
d' (to °C)		5
e'		5
d_c g/ml	0.605	5
v_c ml/g	1.652	5
t_c °C	371.	5
P_c mm	30719.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9534	5
t_e	0.9409	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.8456	1
40	0.6462	1
60	0.5168	1
80	0.4267	1
B^v (10 to 90 °C)	498.5	4
A^v	$\bar{2}$.21874	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	34.14	1
30	32.95	1
40	31.80	1
Parachor [P] 20°C	252.5	4
30	252.7	4
40	252.9	4
Sugd.	253.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	0.143	1
Water in	0.052	1

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 25

NAME	1,2,3-Tribromopropane	STRUCTURAL FORMULA
Mole % Pur. 99.94 (Ref. 1)	Molecular Formula $C_3H_5Br_3$; Molecular Weight 280.818	$BrCH_2CHBrCH_2Br$

Property	Value	Ref.
F.P. °C	16.19	1
F.P. 100%		
B.P. °C 760 mm	222.16	4
100	149.18	5
30	116.68	5
10	91.79	5
1	50.01	5
Pressure mm 25°C	0.1726	5
t_e	1336.5	5
Density g/ml 20°C	2.42086	1
d^t_4 25	2.41104	1
30	2.40122	4
a	2.46014	4
b	-0.00196	4
Ref. Index n_D 20°C	1.58621	1
25	1.58356	1
50	1.57120	1
"C"	0.3153	4
MR (Obs.)	38.941	4
MR (Calc.)	39.349	5
(nD-d/2)	0.3758	4
Dielectric	6.256	1
A 117 to 322 °C	7.09534	4
B	1779.2	4
C	200.	4
A* 117 to 257 °C	1.84916	5
B*	1681.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 322 to t_c °C	7.5173	5
Bc	2246.	5
Cc	264.	5
Cryos. consts. A°	0.02811	1
B°		
t_e °C	247.0	5

Property	Value	Ref.
dt/dP °C/mm 25°C	74.77	5
BP	0.0572	4
t_e	0.03669	5
30 mm	0.8160	5
ΔHm cal/g	20.24	4
ΔHv cal/g 25°C	48.76	5
30 mm	43.94	5
BP	37.27	5
t_e	35.83	5
t_e (d, e)	35.70	5
ΔHv/T_e	19.34	5
d 117 to 247 °C	51.31	5
e	0.0632	5
d' to °C		
e'		
d_c g/ml	1.2887	5
v_c ml/g	0.776	5
t_c °C	550.	5
P_c mm	56554.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9234	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	3.1764	1
40	1.8776	1
60	1.2651	1
80	0.9249	1
B^v 35 to 85 °C	850.07	4
A^v	$\bar{3}$.55946	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	45.86	1
30	44.59	1
40	43.28	1
Parachor [P] 20°C	301.9	4
30	302.2	4
40	302.4	4
Sugd.	303.9	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C	None	
Fire Point	None	
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 26

NAME	n-Butyl chloride	STRUCTURAL FORMULA
	1-Chlorobutane	
Mole % Pur. 99.81 Ref. 1	Molecular Formula C_4H_9Cl Molecular Weight 92.569	$CH_3(CH_2)_3Cl$

		Ref.
F.P. °C	-123.2	1
F.P. 100%		
B.P. °C		
760 mm	78.44	2
100	24.47	2
30	+0.67	2
10	-17.39	2
1	-47.18	5
Pressure mm 25°C	102.43	5
t_e	950.6	5
Density g/ml 20°C	0.88621	1
d^t_4 25	0.88080	1
30	0.87539	4
a	0.90790	4
b	-0.0$_2$106	4
Ref. Index n_D 20°C	1.40211	1
25	1.39953	1
30	1.39686	4
"C"	0.6048	4
MR (Obs.)	25.539	5
MR (Calc.)	25.440	4
(nD-d/2)	0.95901	4
Dielectric	7.39	3'
A 0 to	6.93790	2
B 123 °C	1227.43	2
C	224.10	2
A* 0 to	1.32214	5
B* 100 °C	1148.80	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 123 to	7.13392	5
Bc t_c °C	1410.8	5
Cc	255.0	5
Cryos. A°		
consts. B°		
t_e °C	85.87	5

		Ref.
dt/dP °C/mm		
25°C	0.2143	5
BP	0.0426	5
t_e	0.0358	5
30 mm	0.5959	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.31	5
30 mm	90.03	5
BP	78.18	5
t_e	77.07	5
t_e (d, e)	76.95	5
$\Delta Hv/T_e$	19.84	5
d 0 to	90.13	5
e 80 °C	0.1523	5
d' to		
e' °C		
d_c g/ml	0.207	5
v_c ml/g	3.370	5
t_c °C	269.0	5
P_c mm	27641.	5
PV/RT		
25°C	0.9936	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9517	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 15 °C	0.5260	3
30	0.4626	3
B^v 5 to	324.9	4
A^v 40 °C	$\bar{2}$.59365	4
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	22.42	5
γ 30	21.32	5
40	20.25	5
Parachor [P] 20°C		
30		
40		
Sugd.	227.4	5
Exp. L.l.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 Timmermans; 3' NBS

No. 1

NAME	Ethene (Ethylene)		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_2H_4	Molecular Weight 28.052
			$CH_2=CH_2$

		Ref.
F.P. °C	-169.15≠	2
F.P. 100%		
B.P. °C 760 mm	-103.71	2
100	-131.78	2
30	-144.00	2
10	-153.22	2
1	-168.30	5
Pressure mm 25°C		
t_e	429.3	5
Density g/ml-10°C	0.384	3'
d_4^t 0	0.345	3'
30		
a	0.433	4
b	-0.0013	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	10.969	5
(nD-d/2)		
Dielectric		
A -144 to	6.74756	2
B - 61°C	585.	2
C	255.	2
A* -144 to	0.81634	4
B* - 80°C	528.72	4
K	23.1	4
c	-0.21634	4
t_k -80 to	-70.0	4
t_x -40 °C	38.2	4
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac -61 to	7.3063	5
Bc t_c °C	1096.	5
Cc	397.	5
Cryos. consts. A°	0.03725	2
B°	0.0130	2
t_e °C	-112.83	5

		Ref.
dt/dP °C/mm 25°C		
BP	0.0224	2
t_e	0.03495	5
30 mm	0.3049	5
ΔHm cal/g		
ΔHv cal/g 25°C		
30 mm	129.08	5
BP	115.39	2
t_e	119.91	5
t_e (d, e)	118.53	5
ΔHv/T_e	20.97	5
d -144 to	80.15	5
e -115 °C	0.3398	5
d' to		
e' °C		
d_c g/ml	0.21	3'
v_c ml/g	4.76	3'
t_c °C	9.90	2
P_c mm	38380.	2
PV/RT 25°C		
30 mm	1.0000	5
BP	0.9681	5
t_e	0.9622	5
t_c	0.290	3'
ΔHc kcal/m	316.20	2
ΔHf		
ΔFf		
Viscosity centistokes η -125 °C	0.23	2
-115	0.20	2
-105	0.16	2
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37252	2
400	0.45986	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0698	4
n	600 °K	0.0011	4
o		-0.0$_6$34	4
m'	700 to	0.1300	4
n'	1000 °K	0.0010	4
o'		-0.0$_6$32	4
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		101.2	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$ ≠ at saturation pressure (triple point) + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Comm. Leiden 7° 189 a, b, c (Timmermans) Mathias et al; 3' Lange

No. 2

NAME	Propene (Propylene)		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_3H_6	Molecular Weight 42.078
			$CH_3CH{=}CH_2$

		Ref.
F.P. °C	-185.25#	2
F.P. 100%		
B.P. °C 760 mm	-47.70	2
100	-84.12	2
30	-100.06	2
10	-112.11	2
1	-131.89	5
Pressure mm 25°C	8582.	5
t_e	593.97	5
Density g/ml 20°C		
d^t_4 25	0.5139≠	2
30	0.5053≠	2
a	0.5585	4
b	-0.00123	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	15.587	5
(nD-d/2)		
Dielectric		
A (-100 to -0.6 °C)	6.81960	2
B	785.	2
C	247.	2
A* (-100 to -43 °C)	1.03651	5
B*	729.9	5
K		
c		
t_k to		
t_x °C		
A' (to °C)		
B'		
C'		
A'* to		
B'* °C		
Ac (-0.6 to t_c °C)	7.2658	5
Bc	1020.	5
Cc	282.	5
Cryos. consts. A°	0.04673	2
B°	0.0054	2
t_e °C	-52.97	5

		Ref.
dt/dP °C/mm 25°C		
BP	0.0289	2
t_e	0.0351	5
30 mm	0.3982	5
ΔHm cal/g		
ΔHv cal/g 25°C	140.78	5
30 mm	118.24	5
BP	104.62	2
t_e	106.03	5
t_e (d, e)	105.99	5
$\Delta Hv/T_e$	20.31	5
d (-100 to -53 °C)	92.22	5
e	0.2600	5
d' (to °C)		
e'		
d_c g/ml	0.233	2
v_c ml/g	4.302	2
t_c °C	91.9	2
P_c mm	34504.	2
PV/RT 25°C		
30 mm	1.0000	5
BP	0.9632	5
t_e	0.9694	5
t_c	0.274	2
ΔHc kcal/m	460.43	2
ΔHf		
ΔFf		
Viscosity centistokes η -115°C	0.48	2
-105	0.40	2
- 95	0.35	2
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300 °K	0.36456	2
400	0.45392	2
c_v vap.		

		Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600°K)	0.0622	4
n	0.0011	4
o	$-0.0_{6}29$	4
m' (700 to 1000°K)	0.0970	4
n'	0.0011	4
o'	$-0.0_{6}34$	4
Surface tension dynes/cm. γ 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	140.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

≠ at saturation pressure

at saturation pressure (triple point)

No. 3

NAME	1-Butene (Butylene)		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_4H_8	Molecular Weight 56.104
			$CH_3CH_2CH=CH_2$

Property	Value	Ref.
F.P. °C	-185.35#	2
F.P. 100%		
B.P. °C 760 mm	-6.26	2
100	-48.77	2
30	-67.41	2
10	-81.5	2
1	-104.7	5
Pressure mm 25°C	2217.	5
t_e	703.	5
Density g/ml 20°C	0.5951≠	2
d^t_4 25	0.5888≠	2
30		
a	0.6227	4
b	-0.0011	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	20.205	5
Dielectric		
A -67 to	6.84290	2
B 40 °C	926.1	2
C	240.	2
A* -67 to	1.13369	5
B* 2 °C	865.72	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 40 to	7.2793	5
Bc t_c °C	1186.	5
Cc	277.	5
Cryos. consts. A°	0.06002	2
B°	0.0045	2
t_e °C	-8.229	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.01483	5
BP	0.0337	2
t_e	0.0358	5
30 mm	0.4656	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.8	2
30 mm	107.38	5
BP	93.36	2
t_e	93.80	5
t_e (d, e)	93.81	5
$\Delta Hv/T_e$	19.86	5
d -67 to	91.92	5
e -9 °C	0.2293	5
d' to		
e' °C		
d_c g/ml	0.233	2
v_c ml/g	4.296	2
t_c °C	146.	2
P_c mm	30172.	2
PV/RT 25°C	0.9177	5
30 mm	1.0000	5
BP	0.9518	5
t_e	0.9540	5
t_c	0.277	2
ΔHc kcal/m	607.37	2
ΔHf		
ΔFf		
Viscosity centistokes η -55 °C	0.32	2
-45	0.28	2
-35	0.25	2
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.36664	2
400	0.46414	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0121	4
n 600 °K	0.0013	4
o	-0.0_652	4
m' 700 to	0.1051	4
n' 1000 °K	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. 20°C	12.50	5
γ 30	11.29	5
40	10.11	5
Parachor [P] 20°C		
30		
40		
Sugd.	179.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

≠ at saturation pressure

at saturation pressure (triple point)

No. 4

NAME	cis-2-Butene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3CH{=}CHCH_3$
Molecular Formula	C_4H_8	
Molecular Weight	56.104	

		Ref.
F.P. °C	-138.910	2
F.P. 100%		
B.P. °C 760 mm	3.720	2
100	-39.824	2
30	-58.94	2
10	-73.42	2
1	-97.2	5
Pressure mm 25°C	1604.0	5
t_e	741.2	5
Density g/ml 20°C	0.6213≠	2
d_4^t 25	0.6154≠	2
30	0.6094	4
a	0.6464	4
b	-0.0010	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	20.205	5
(nD-d/2)		
Dielectric		
A (-59 to 541 °C)	6.86926	2
B	960.1	2
C	237.	2
A* (-59 to 13 °C)	1.1261	5
B*	894.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (541 to t_c °C)	7.3023	5
Bc	1229.	5
Cc	275.	5
Cryos. consts. A°	0.04877	2
B°	0.0052	2
t_e °C	3.07	5

		Ref.
dt/dP °C/mm 25°C	0.0194	5
BP	0.0345	2
t_e	0.0352	5
30 mm	0.4780	5
ΔHm cal/g		
ΔHv cal/g 25°C	94.5	2
30 mm	113.38	5
BP	99.46	2
t_e	99.61	5
t_e (d, e)	99.61	5
$\Delta Hv/T_e$	20.23	5
d (-59 to 3 °C)	100.29	5
e	0.2221	5
d' to °C		
e'		
d_c g/ml	0.238	2
v_c ml/g	4.206	2
t_c °C	155.	2
P_c mm	31160.	2
PV/RT 25°C	0.8766	4
30 mm	1.0000	5
BP	0.9637	4
t_e	0.9643	5
t_c	0.276	2
ΔHc kcal/m	605.73	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300 °K	0.33794	2
400	0.43366	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	0.0176	4
n	0.0012	4
o	-0.0_628	4
m' (700 to 1000 °K)	0.0424	4
n'	0.0012	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	15.07	5
30	13.80	5
40	12.55	5
Parachor [P] 20°C		
30		
40		
Sugd.	179.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 5

NAME	trans-2-Butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_4H_8 / Molecular Weight 56.104	$CH_3CH=CHCH_3$

		Ref.
F.P. °C	-105.550	2
F.P. 100%		
B.P. °C 760 mm	0.88	2
100	-42.69	2
30	-61.82	2
10	-76.3	2
1	-100.1	5
Pressure mm 25°C	1753.	4
t_e	729.7	5
Density g/ml 20°C	0.6042≠	2
d^t_4 25	0.5984≠	2
30	0.5925	4
a	0.6291	4
b	-0.0010	4
Ref. Index n_D 20°C, 25, 30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	20.205	5
Dielectric		
A -62 to	6.86952	2
B 49°C	960.8	2
C	240.	2
A* -62 to	1.13404	5
B* 10°C	895.9	5
K		
c, t_k, t_x to °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac 49 to	7.3082	5
Bc t_c °C	1231.	5
Cc	278.	5
Cryos. consts. A°	0.04177	2
B°	0.0058	2
t_e °C	-0.183	5

		Ref.
dt/dP °C/mm 25°C	0.0181	4
BP	0.0345	2
t_e	0.0356	5
30 mm	0.4783	5
ΔHm cal/g		
ΔHv cal/g 25°C	91.8	2
30 mm	110.28	5
BP	96.94	2
t_e	97.17	5
t_e (d, e)	97.17	5
ΔHv/T_e	19.97	5
d -62.0 to	97.13	5
e -0.2°C	0.2128	5
d', e' to °C		
d_c g/ml	0.238	2
v_c ml/g	4.206	2
t_c °C	155.	2
P_c mm	31160.	2
PV/RT 25°C	0.9333	4
30 mm	1.0000	5
BP	0.9595	4
t_e	0.9606	5
t_c	0.276	2
ΔHc kcal/m	604.73	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.37573	2
400	0.46378	2
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	0.0816	4
n		0.0011	4
o		-0.0_625	4
m'	700 to 1000 °K	0.0851	4
n'		0.0011	4
o'		-0.0_637	4
Surface tension dynes/cm. γ 20°C		13.43	5
30		12.27	5
40		11.13	5
Parachor [P] 20°C, 30, 40			
Sugd.		179.2	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec., Ultra V., X-Ray Dif., Infrared			
Solubility in⁺ Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in			

T_R = 0.75 T_c ≠ at saturation pressure ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	2-Methylpropene Isobutene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_4H_8	Molecular Weight 56.104	$CH_3C = CH_2$ CH_3

		Ref.
F.P. °C	-140.350	2
F.P. 100%		
B.P. °C		
760 mm	-6.900	2
100	-49.309	2
30	-67.90	2
10	-81.95	2
1	-105.06	5
Pressure mm 25°C	2278.	4
t_e	710.1	5
Density g/ml 20°C	0.5942≠	2
d_4^t 25	0.5879≠	2
30	0.5815	4
a	0.6219	4
b	-0.0011	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	20.205	5
(nD-d/2)		
Dielectric		
A -68 to	6.84134	2
B 39 °C	923.2	2
C	240.	2
A* -68 to	1.12232	5
B* 1 °C	861.1	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 39 to	7.2777	5
Bc t_c °C	1183.	5
Cc	277.	5
Cryos. consts. A°	0.04044	2
B°	0.005	2
t_e °C	-8.623	4

		Ref.
dt/dP °C/mm		
25°C	0.0145	4
BP	0.0336	2
t_e	0.0355	4
30 mm	0.4645	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.7	2
30 mm	107.14	5
BP	94.22	2
t_e	94.59	4
t_e (d, e)	94.59	4
ΔHv/T_e	20.06	5
d -68 to	92.76	5
e -9 °C	0.2119	5
d' to		
e' °C		
d_c g/ml	0.234	2
v_c ml/g	4.278	2
t_c °C	144.73	2
P_c mm	29982.	2
PV/RT		
25°C	0.9314	4
30 mm	1.0000	5
BP	0.9629	4
t_e	0.9646	5
t_c	0.276	2
ΔHc kcal/m	603.36	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.38126	2
400	0.47358	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0498	4
n 600 °K	0.0012	4
o	-0.0_645	4
m' 700 to	0.1217	4
n' 1000 °K	0.0011	4
o'	-0.0_634	4
Surface tension dynes/cm. γ 20°C	12.42	5
30	11.22	5
40	10.04	5
Parachor [P] 20°C		
30		
40		
Sugd.	179.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

- $T_R = 0.75 T_c$ ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	1-Pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_{10} / Molecular Weight 70.130	$CH_3(CH_2)_2CH=CH_2$

Property	Value	Ref.
F.P. °C	-165.220	2
F.P. 100%		
B.P. °C 760 mm	29.968	2
100	-17.92	2
30	-38.91	2
10	-54.8	2
1	-80.9	5
Pressure mm 25°C	648.8	4
t_e	813.4	5
Density g/ml 20°C	0.64050	2
d^t_4 25	0.63533	2
30	0.63012	4
a	0.66168	4
b	-0.0_3954	4
Ref. Index n_D 20°C	1.37148	2
25	1.36835	2
30	1.36512	4
"C"	0.7764	4
MR (Obs.)	24.854	2
MR (Calc.)	24.36	5
(nD-d/2)	1.05123	2
Dielectric		
A -39 to 73 °C	6.84650	2
B	1044.9	2
C	234.	2
A* -39 to 42 °C	1.16738	5
B*	974.8	5
K		
c		
t_k to		
t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 73 to t_c °C	7.2751	5
Bc	1324.	5
Cc	272.	5
Cryos. consts. A°	0.05995	2
Cryos. consts. B°	0.0048	2
t_e °C	31.94	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.04297	5
BP	0.03797	5
t_e	0.0360	5
30 mm	0.5247	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.93	5
30 mm	98.81	5
BP	86.24	5
t_e	85.88	5
t_e (d, e)	85.88	5
ΔHv/T_e	19.74	5
d -39 to 32 °C	91.71	5
e	0.1825	5
d' to °C		
e'		
d_c g/ml	0.227	5
v_c ml/g	4.409	5
t_c °C	188.	5
P_c mm	25113.	5
PV/RT 25°C	0.9657	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9581	5
t_c	0.270	5
ΔHc kcal/m	754.25	2
ΔHf		
ΔFf		
Viscosity centistokes η -20 °C	0.30	2
-10	0.27	2
0	0.24	2
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.37516	2
400	0.47198	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0283	4
n	0.0013	4
o	-0.0_647	4
m' 700 to 1000 °K	0.1035	4
n'	0.0011	4
o'	-0.0_637	4
Surface tension dynes/cm. γ 20°C	15.57	5
30	14.50	5
40	13.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	218.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	126.1	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 8

NAME	cis-2-Pentene	STRUCTURAL FORMULA
		$CH_3CH_2CH=CHCH_3$
Mole % Pur.	Ref.	Molecular Formula C_5H_{10} — Molecular Weight 70.130

Property	Value	Ref.
F.P. °C	-151.390	2
F.P. 100%		
B.P. °C 760 mm	36.942	2
100	-11.42	2
30	-32.66	2
10	-48.7	2
1	-75.2	5
Pressure mm 25°C	494.6	5
t_e	829.6	5
Density g/ml 20°C	0.6556	2
d^t_4 25	0.6504	2
30	0.6452	4
a	0.6767	4
b	-0.0$_3$98	4
Ref. Index n_D 20°C	1.3830	2
25	1.3798	2
30	1.3766	4
"C"	0.7808	4
MR (Obs.)	24.95	2
MR (Calc.)	24.36	5
(nD-d/2)	1.0552	2
Dielectric		
A (-33 to 82 °C)	6.87274	2
B	1068.0	2
C	231.	2
A* (-33 to 50 °C)	1.20088	5
B*	1002.4	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (82 to t_c °C)	7.2973	5
Bc	1350.	5
Cc	270.	5
Cryos. consts. A°	0.05768	2
B°	0.0048	2
t_e °C	39.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0537	5
BP	0.03830	2
t_e	0.0358	5
30 mm	0.5310	5
ΔHm cal/g		
ΔHv cal/g 25°C	91.48	5
30 mm	102.91	5
BP	89.12	5
t_e	88.62	5
t_e (d, e)	88.61	5
ΔHv/T_e	19.87	5
d (-33 to 40 °C)	96.44	5
e	0.1982	5
d' (to °C)		
e'		
d_c g/ml	0.232	5
v_c ml/g	4.303	5
t_c °C	210.	5
P_c mm	26762.	5
PV/RT 25°C	0.9671	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9535	5
t_c	0.268	5
ΔHc kcal/m	752.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300 °K	0.34864	2
400	0.45016	2
c_v vap.		

Property	Value	Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	-0.0106	4
n	0.0013	4
o	-0.0$_6$46	4
m' (700 to 1000 °K)	0.0568	4
n'	0.0012	4
o'	-0.0$_6$41	4
Surface tension dynes/cm. γ 20°C	17.14	5
30	16.01	5
40	14.89	5
Parachor [P] 20°C		
30		
40		
Sugd.	218.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	130.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	trans-2-Pentene	STRUCTURAL FORMULA
		$CH_3CH_2CH{=}CHCH_3$
Mole % Pur.	Ref.	Molecular Formula C_5H_{10} · Molecular Weight 70.130

Property	Value	Ref.
F.P. °C	-140.244	2
F.P. 100%		
B.P. °C 760 mm	36.353	2
100	-12.00	2
30	-33.28	2
10	-49.4	2
1	-76.0	5
Pressure mm 25°C	505.5	5
t_e	828.0	5
Density g/ml 20°C	0.6482	2
d_4^t 25	0.6431	2
30	0.6379	4
a	0.6690	4
b	-0.0_396	4
Ref. Index n_D 20°C	1.3793	2
25	1.3761	2
30	1.3729	4
"C"	0.7825	4
MR (Obs.)	25.02	2
MR (Calc.)	24.36	5
(nD-d/2)	1.0552	2
Dielectric		
A (-33 to 81 °C)	6.90575	2
B	1084.0	2
C	233.	2
A* (-33 to 49 °C)	1.22421	5
B*	1013.6	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (81 to t_c °C)	7.3347	5
Bc	1370.	5
Cc	272.	5
Cryos. consts. A°	0.05685	2
B°	0.0052	2
t_e °C	38.86	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0527	5
BP	0.03824	2
t_e	0.0358	5
30 mm	0.5325	5
ΔHm cal/g		
ΔHv cal/g 25°C	91.02	5
30 mm	102.10	5
BP	88.92	5
t_e	88.44	5
t_e (d, e)	88.44	5
$\Delta Hv/T_e$	19.88	5
d (-33 to 39 °C)	95.80	5
e	0.1893	5
d' to °C		
e'		
d_c g/ml	0.237	4
v_c ml/g	4.216	4
t_c °C	199.	5
P_c mm	26693.	5
PV/RT 25°C	0.9653	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9536	5
t_c	0.268	5
ΔHc kcal/m	751.66	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37131	2
400	0.46585	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0406	4
n	0.0012	4
o	-0.0_639	4
m' (700 to 1000 °K)	0.0980	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	16.38	5
30	15.29	5
40	14.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	218.2	5
Exp. L.l.%/wt. u.		
Dispersion	132.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	2-Methyl-1-butene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_5H_{10}	Molecular Weight 70.130	$CH_3CH_2C(CH_3) = CH_2$

		Ref.
F.P. °C	-137.560	2
F.P. 100%		
B.P. °C		
760 mm	31.163	2
100	-16.54	2
30	-37.50	2
10	-53.4	2
1	-79.5	5
Pressure mm 25°C	610.0	4
t_e	813.	5
Density g/ml 20°C	0.6504	2
d_4^t 25	0.6451	2
30	0.6397	4
a	0.6721	4
b	-0.0$_3$98	4
Ref. Index n_D 20°C	1.3778	2
25	1.3746	2
30	1.3713	4
"C"	0.7769	4
MR (Obs.)	24.85	2
MR (Calc.)	24.36	5
(nD-d/2)	1.0526	2
Dielectric		
A (-38 to 75 °C)	6.87314	2
B	1053.8	2
C	233.	2
A* (-38 to 43 °C)	1.20404	5
B*	986.94	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (75 to t_c °C)	7.3005	5
Bc	1334.	5
Cc	271.	5
Cryos. consts. A°	0.05167	2
B°	0.0043	2
t_e °C	33.12	5

		Ref.
dt/dP °C/mm		
25°C	0.0449	5
BP	0.03778	2
t_e	0.0358	5
30 mm	0.5239	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.15	5
30 mm	100.15	5
BP	86.99	5
t_e	86.62	5
t_e (d, e)	86.62	5
ΔHv/T_e	19.83	5
d (-38 to 33 °C)	92.97	5
e	0.1917	5
d' to		
e' °C		
d_c g/ml	0.237	5
v_c ml/g	4.224	5
t_c °C	191.	5
P_c mm	26188.	5
PV/RT		
25°C	0.9618	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9541	5
t_c	0.268	5
ΔHc kcal/m	750.57	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.38243	2
400	0.48068	2
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0201	4
n	0.0014	4
o	-0.0$_6$56	4
m' (700 to 1000 °K)	0.1147	4
n'	0.0011	4
o'	-0.0$_6$37	4
Surface tension dynes/cm. γ 20°C	16.56	5
30	15.42	5
40	14.30	5
Parachor [P] 20°C		
30		
40		
Sugd.	218.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	133.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	3-Methyl-1-butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_{10} / Molecular Weight 70.130	$CH_3CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C	-168.495	2
F.P. 100%		
B.P. °C 760 mm	20.061	2
100	-26.82	2
30	-47.3	2
10	-62.9	2
1	-88.3	5
Pressure mm 25°C	902.	5
t_e	784.	5
Density g/ml 20°C	0.6272≠	2
d_4^t 25	0.6219≠	2
30	0.6168≠	4
a	0.6490	4
b	-0.00094	4
Ref. Index n_D 20°C	1.3643≠	2
25	1.3611≠	2
30	1.3587≠	4
"C"	0.7784	4
MR (Obs.)	24.94	2
MR (Calc.)	24.36	5
(nD-d/2)	1.0507	2
Dielectric		
A -47 to 60 °C	6.82618	2
B	1013.474	2
C	237.	2
A* -47 to 31 °C	1.16759	5
B*	946.98	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 60 to t_c °C	7.2588	5
Bc	1286.	5
Cc	274.	5
Cryos. consts. A°	0.05888	2
B°	0.0047	2
t_e °C	20.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0326	5
BP	0.03721	2
t_e	0.0363	5
30 mm	0.5128	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.51	5
30 mm	93.96	5
BP	82.20	5
t_e	81.96	5
t_e (d, e)	82.05	5
$\Delta Hv/T_e$	19.54	5
d -47 to 21 °C	85.70	5
e	0.1744	5
d' to e' °C		
d_c g/ml	0.219	5
v_c ml/g	4.568	5
t_c °C	170.	5
P_c mm	23294.	5
PV/RT 25°C	0.9518	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9576	5
t_c	0.270	5
ΔHc kcal/m	752.33	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.40596	2
400	0.50278	2
c_v vap.		

Property	Range	Value	Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	0.0231	4
n		0.0015	4
o		-0.0_677	4
m'	700 to 1000 °K	0.1380	4
n'		0.0011	4
o'		-0.0_637	4
Surface tension dynes/cm. γ 20°C		15.57	5
30		14.50	5
40		13.45	5
Parachor [P] 20°C			
30			
40			
Sugd.		218.2	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in⁺ Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75 T_c$ ≠at saturation pressure ⁺grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	2-Methyl-2-butene	STRUCTURAL FORMULA
		$CH_3CH{=}C(CH_3)CH_3$
Mole % Pur.	Ref.	Molecular Formula C_5H_{10}	Molecular Weight 70.130

Property	Value	Ref.
F.P. °C	-133.768	2
F.P. 100%		
B.P. °C 760 mm	38.568	2
100	-10.06	2
30	-31.48	2
10	-47.7	2
1	-74.5	5
Pressure mm 25°C	466.1	5
t_e	834.3	5
Density g/ml 20°C	0.6623	2
d^t_4 25	0.6570	2
30	0.6517	4
a	0.6838	4
b	-0.0_210	4
Ref. Index n_D 20°C	1.3874	2
25	1.3842	2
30	1.3809	4
"C"	0.7813	4
MR (Obs.)	24.95	2
MR (Calc.)	24.36	5
(nD-d/2)	1.0563	2
Dielectric		
A (-31 to 85 °C)	6.91562	2
B	1095.088	2
C	233.	2
A* (-31 to 51 °C)	1.24011	5
B*	1026.4	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (85 to t_c °C)	7.3453	5
Bc	1385.	5
Cc	272.	5
Cryos. consts. A°	0.04703	2
B°	0.0048	2
t_e °C	41.32	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0566	5
BP	0.03844	2
t_e	0.0357	5
30 mm	0.5360	5
ΔHm cal/g		
ΔHv cal/g 25°C	91.86	5
30 mm	102.96	5
BP	89.73	5
t_e	89.21	5
t_e (d, e)	89.21	5
$\Delta Hv/T_e$	19.89	5
d (-31 to 41 °C)	97.01	5
e	0.1889	5
d' to		
e' °C		
d_c g/ml	0.242	5
v_c ml/g	4.128	5
t_c °C	204.	5
P_c mm	27547.	5
PV/RT 25°C	0.9645	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9534	5
t_c	0.268	5
ΔHc kcal/m	749.08	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.35962	2
400	0.45530	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m (300 to 600 °K)	0.0238	4
n	0.0012	4
o	-0.0_641	4
m' (700 to 1000 °K)	0.0692	4
n'	0.0011	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	17.87	5
30	16.68	5
40	15.51	5
Parachor [P] 20°C		
30		
40		
Sugd.	218.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	135.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	1-Hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156	$CH_3(CH_2)_3CH=CH_2$

Property	Value	Ref.
F.P. °C	-139.819	2
F.P. 100%		
B.P. °C 760 mm	63.485	2
100	11.109	2
30	-11.88	2
10	-29.3	2
1	-57.9	5
Pressure mm 25°C	187.2	5
t_e	905.	5
Density g/ml 20°C	0.67317	2
d_4^t 25	0.66848	2
30	0.66377	4
a	0.69199	4
b	-0.0_3906	4
Ref. Index n_D 20°C	1.38788	2
25	1.38502	2
30	1.38219	4
"C"	0.7696	4
MR (Obs.)	29.492	2
MR (Calc.)	28.978	5
(nD-d/2)	1.05130	2
Dielectric		
A -12 to 103 °C	6.86572	2
B	1152.971	2
C	226.	2
A* -12 to 79 °C	1.23301	5
B*	1079.	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 103 to t_c °C	7.2845	5
Bc	1445.	5
Cc	265.	5
Cryos. consts. A°		
B°		
t_e °C	69.08	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1267	5
BP	0.04149	2
t_e	0.0362	5
30 mm	0.5748	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.33	5
30 mm	93.50	5
BP	80.66	5
t_e	79.72	5
t_e (d, e)	79.70	5
ΔHv/T_e	19.60	5
d -12 to 69 °C	91.48	5
e	0.1705	5
d' to °C		
e'		
d_c g/ml	0.230	5
v_c ml/g	4.342	5
t_c °C	228.	5
P_c mm	22668.	5
PV/RT 25°C	0.9857	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9499	5
t_c	0.265	5
ΔHc kcal/m	901.14	2
ΔHf		
ΔFf		
Viscosity centistokes η -10°C	0.37	2
20	0.26	2
40	0.22	2
60	0.19	2
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37763	2
400	0.47566	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0258	4
n	0.0013	4
o	-0.0_648	4
m' 700 to 1000 °K	0.1031	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	17.87	5
30	16.86	5
40	15.86	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt. u.		
Dispersion	121.9	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	cis-2-Hexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156
			$CH_3(CH_2)_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C	-141.135	2
F.P. 100%		
B.P. °C 760 mm	68.84	2
100	15.85	4
30	-7.46	4
10	-25.13	5
1	-54.23	5
Pressure mm 25°C	151.	5
t_e	919.	5
Density g/ml 20°C	0.6869	2
d_4^t 25	0.6823	2
30	0.6777	4
a	0.7053	4
b	-0.0_389	4
Ref. Index n_D 20°C	1.3977	2
25	1.3948	2
30	1.3920	4
"C"	0.7722	4
MR (Obs.)	29.55	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0542	2
Dielectric		
A (-7 to 110 °C)	6.89962	5
B	1184.6	5
C	226.	5
A* (-7 to 85 °C)	1.26086	5
B*	1109.3	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (110 to t_c °C)	7.32029	5
Bc	1484.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	75.01	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1530	5
BP	0.041	2
t_e	0.0361	5
30 mm	0.5832	5
ΔHm cal/g		
ΔHv cal/g 25°C	89.40	5
30 mm	95.30	5
BP	82.33	5
t_e	81.31	5
t_e (d, e)	81.28	5
ΔHv/T_e	19.65	5
d (-7 to 75 °C)	94.03	5
e	0.1700	5
d' to		
e' °C		
d_c g/ml	0.238	5
v_c ml/g	4.202	5
t_c °C	238.	5
P_c mm	23801.	5
PV/RT 25°C	0.9847	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9485	5
t_c	0.264	5
ΔHc kcal/m	899.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.35874	2
400	0.45867	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m (300 to 600 °K)	0.0155	4
n	0.0013	4
o	-0.0_636	4
m' (700 to 1000 °K)	0.0978	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	19.39	5
30	18.34	5
40	17.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt.		
u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 15

NAME	trans-2-Hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{12} / Molecular Weight 84.156	$CH_3(CH_2)_2CH{=}CH\ CH_3$

Property	Value	Ref.
F.P. °C	-132.970	2
F.P. 100%		
B.P. °C 760 mm	67.87	2
100	15.01	4
30	-8.25	4
10	-25.87	5
1	-54.90	5
Pressure mm 25°C	157.	5
t_e	916.	5
Density g/ml 20°C	0.6784	2
d^t_4 25	0.6738	2
30	0.6692	4
a	0.6968	4
b	-0.0_389	4
Ref. Index n_D 20°C	1.3935	2
25	1.3907	2
30	1.3879	4
"C"	0.7741	4
MR (Obs.)	29.64	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0543	2
Dielectric		
A (-8 to 108 °C)	6.89830	5
B	1181.0	5
C	226.	5
A* (-8 to 84 °C)	1.26070	5
B*	1106.0	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (108 to t_c °C)	7.3188	5
Bc	1479.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	73.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1480	5
BP	0.041	2
t_e	0.0361	5
30 mm	0.5818	5
ΔHm cal/g		
ΔHv cal/g 25°C	89.70	5
30 mm	94.98	5
BP	82.05	5
t_e	81.04	5
t_e (d, e)	81.02	5
$\Delta Hv/T_e$	19.65	5
d (-8 to 74 °C)	93.58	5
e	0.1698	5
d' to °C		
e'		
d_c g/ml	0.235	5
v_c ml/g	4.257	5
t_c °C	236.	5
P_c mm	23399.	5
PV/RT 25°C	0.9937	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9485	5
t_c	0.264	5
ΔHc kcal/m	898.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37763	2
400	0.47174	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0582	4
n	0.0012	4
o	-0.0_631	4
m' (700 to 1000 °K)	0.0760	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	18.44	5
30	17.43	5
40	16.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 16

NAME	cis-3-Hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{12} — Molecular Weight 84.156	$CH_3CH_2CH{=}CHCH_2CH_3$

		Ref.
F.P. °C	-137.820	2
F.P. 100%		
B.P. °C 760 mm	66.44	2
100	13.75	4
30	-9.43	4
10	-26.98	5
1	-55.90	5
Pressure mm 25°C	166.	5
t_e	912.	5
Density g/ml 20°C	0.6796	2
d^t_4 25	0.6749	2
30	0.6702	4
a	0.6984	4
b	$-0.0_{3}91$	4
Ref. Index n_D 20°C	1.3947	2
25	1.3920	2
30	1.3889	4
"C"	0.7749	4
MR (Obs.)	29.67	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0549	2
Dielectric		
A -94 to 107 °C	6.89493	5
B	1175.4	5
C	226.	5
A* -94 to 82 °C	1.25194	5
B*	1097.1	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 107 to t_c °C	7.3156	5
Bc	1472.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	72.33	5

		Ref.
dt/dP °C/mm 25°C	0.1410	5
BP	0.041	2
t_e	0.0361	5
30 mm	0.5797	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.52	5
30 mm	94.47	5
BP	81.62	5
t_e	80.64	5
t_e (d, e)	80.62	5
$\Delta Hv/T_e$	19.64	5
d -94 to 72 °C	92.87	5
e	0.1694	5
d' to °C		
e'		
d_c g/ml	0.236	5
v_c ml/g	4.245	5
t_c °C	233.	5
P_c mm	23329.	5
PV/RT 25°C	0.9879	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9487	5
t_c	0.264	5
ΔHc kcal/m	899.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.35303	2
400	0.45748	2
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	-0.0237	4
n	0.0014	4
o	$-0.0_{6}53$	4
m' 700 to 1000 °K	0.0653	4
n'	0.0012	4
o'	$-0.0_{6}42$	4
Surface tension dynes/cm. γ 20°C	18.57	5
30	17.53	5
40	16.52	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. 1.%/wt. u.		
Dispersion	126.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 17

NAME	trans-3-Hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{12} / Molecular Weight 84.156	$CH_3CH_2CH{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C	-113.430	2
F.P. 100%		
B.P. °C 760 mm	67.08	2
100	14.30	4
30	-8.91	4
10	-26.50	5
1	-55.47	5
Pressure mm 25°C	162.	5
t_e	914.	5
Density g/ml 20°C	0.6772	2
d_4^t 25	0.6725	2
30	0.6678	4
a	0.6961	4
b	-0.0_391	4
Ref. Index n_D 20°C	1.3943	2
25	1.3916	2
30	1.3886	4
"C"	0.7770	4
MR (Obs.)	29.75	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0557	2
Dielectric		
A (-9 to 107 °C)	6.89575	5
B	1177.7	5
C	226.	5
A* (-9 to 83 °C)	1.25454	5
B*	1100.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (107 to t_c °C)	7.3162	5
Bc	1475.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	73.05	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1441	5
BP	0.041	2
t_e	0.0361	5
30 mm	0.5807	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.86	5
30 mm	94.68	5
BP	81.80	5
t_e	80.81	5
t_e (d, e)	80.78	5
ΔHv/T_e	19.64	5
d (-9 to 73 °C)	93.17	5
e	0.1696	5
d' to °C		
e'		
d_c g/ml	0.234	5
v_c ml/g	4.270	5
t_c °C	234.	5
P_c mm	23237.	5
PV/RT 25°C	0.9888	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9486	5
t_c	0.264	5
ΔHc kcal/m	898.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37906	2
400	0.47768	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0191	4
n	0.0014	4
o	-0.0_653	4
m' (700 to 1000 °K)	0.0469	4
n'	0.0013	4
o'	-0.0_647	4
Surface tension dynes/cm. γ 20°C	18.31	5
30	17.28	5
40	16.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt. u.		
Dispersion	128.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 18

NAME	2-Methyl-1-pentene	STRUCTURAL FORMULA
		$CH_3(CH_2)_2C(CH_3) = CH_2$

Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156

		Ref.
F.P. °C	-135.720	2
F.P. 100%		
B.P. °C 760 mm	60.7	2
100	8.77	4
30	-14.06	4
10	-31.35	5
1	-59.83	5
Pressure mm 25°C	206.	5
t_e	896.	5
Density g/ml 20°C	0.6799	2
d^t_4 25	0.6751	2
30	0.6720	4
a	0.7010	4
b	-0.0_393	4
Ref. Index n_D 20°C	1.3920	2
25	1.3891	2
30	1.3856	4
"C"	0.7666	4
MR (Obs.)	29.47	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0506	2
Dielectric		
A -14 to 100°C	6.88772	5
B	1154.7	5
C	227.	5
A* -14 to 76°C	1.25060	5
B*	1076.8	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 100 to	7.30907	5
Bc t_c °C	1447.	5
Cc	267.	5
Cryos. A°		
consts. B°		
t_e °C	65.92	5

		Ref.
dt/dP °C/mm 25°C	0.1163	5
BP	0.0413	2
t_e	0.0361	5
30 mm	0.5710	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.91	5
30 mm	92.57	5
BP	80.01	5
t_e	79.15	5
t_e (d, e)	79.13	5
ΔHv/T_e	19.64	5
d -14 to	90.21	5
e 66 °C	0.1680	5
d' to		
e' °C		
d_c g/ml	0.237	5
v_c ml/g	4.223	5
t_c °C	225.	5
P_c mm	23164.	5
PV/RT 25°C	0.9817	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9492	5
t_c	0.265	5
ΔHc kcal/m	897.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap 300 °K	0.38690	2
400	0.48481	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0262	4
n 600 °K	0.0014	4
o	-0.0_656	4
m' 700 to	0.1283	4
n' 1000 °K	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	18.78	5
30	17.70	5
40	16.64	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. l. %/wt.		
u.		
Dispersion	129.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	3-Methyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	
Molecular Formula C_6H_{12}	Molecular Weight 84.156	$CH_3CH_2CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C	-153.0	2
F.P. 100%		
B.P. °C 760 mm	54.14	2
100	3.06	4
30	-19.38	4
10	-36.38	5
1	-64.34	5
Pressure mm 25°C	264.	5
t_e	877.	5
Density g/ml 20°C	0.6675	2
d^t_4 25	0.6628	2
30	0.6581	4
a	0.6865	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.3842	2
25	1.3814	2
30	1.3786	4
"C"	0.7691	4
MR (Obs.)	29.49	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0504	2
Dielectric		
A -19 to 92 °C	6.87729	5
B	1130.4	5
C	229.	5
A* -19 to 69 °C	1.26723	5
B*	1062.0	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 92 to t_c °C	7.2989	5
Bc	1417.	5
Cc	267.	5
Cryos. A° consts. B°		
t_e °C	58.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0936	5
BP	0.040	2
t_e	0.0362	5
30 mm	0.5612	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.10	5
30 mm	90.36	5
BP	78.99	5
t_e	77.39	5
t_e (d, e)	77.38	5
ΔHv/T_e	19.63	5
d -19 to 59 °C	87.36	5
e	0.1546	5
d' to °C		
e'		
d_c g/ml	0.234	5
v_c ml/g	4.276	5
t_c °C	213.	5
P_c mm	22329.	5
PV/RT 25°C	0.9798	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9498	5
t_c	0.265	5
ΔHc kcal/m	900.08	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.41376	2
400	0.52759	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	-0.0261	4
n	0.0017	4
o	-0.0_682	4
m' 700 to 1000 °K	0.1155	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	17.24	5
30	16.24	5
40	15.25	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c [+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	4-Methyl-1-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156

STRUCTURAL FORMULA: $CH_3CH(CH_3)CH_2CH{=}CH_2$

		Ref.
F.P. °C	-153.63	2
F.P. 100%		
B.P. °C 760 mm	53.88	2
100	2.84	4
30	-19.58	4
10	-36.57	5
1	-64.51	5
Pressure mm 25°C	267.	5
t_e	877.	5
Density g/ml 20°C	0.6642	2
d^t_4 25	0.6594	2
30	0.6546	4
a	0.6836	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.3828	2
25	1.3799	2
30	1.3770	4
"C"	0.7703	4
MR (Obs.)	29.54	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0507	2
Dielectric		
A -20 to 91 °C	6.87757	5
B	1130.0	5
C	229.	5
A* -20 to 68 °C	1.25996	5
B*	1059.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 91 to t_c °C	7.2991	5
Bc	1415.	5
Cc	267.	5
Cryos. A° consts. B°		
t_e °C	58.35	5

		Ref.
dt/dP °C/mm 25°C	0.0928	5
BP	0.0404	2
t_e	0.0361	5
30 mm	0.5607	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.95	5
30 mm	90.29	5
BP	78.14	5
t_e	77.41	5
t_e (d, e)	77.40	5
$\Delta Hv/T_e$	19.65	5
d -20 to 58 °C	87.05	5
e	0.1653	5
d' to		
e' °C		
d_c g/ml	0.233	5
v_c ml/g	4.295	5
t_c °C	212.	5
P_c mm	22185.	5
PV/RT 25°C	0.9807	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9509	5
t_c	0.265	5
ΔHc kcal/m	899.44	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.36171	2
400	0.46224	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	-0.0583	4
n	0.0015	4
o	-0.0_657	4
m' 700 to 1000 °K	0.0700	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	16.90	5
30	15.90	5
40	14.91	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.l.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 21

NAME	2-Methyl-2-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156

STRUCTURAL FORMULA: $CH_3CH_2CH{=}C(CH_3)CH_3$

		Ref.
F.P. °C	-135.070	2
F.P. 100%		
B.P. °C 760 mm	67.29	2
100	14.48	4
30	-8.75	4
10	-26.36	5
1	-55.34	5
Pressure mm 25°C	160.	5
t_e	914.	5
Density g/ml 20°C	0.6863	2
d_4^t 25	0.6815	2
30	0.6767	4
a	0.7055	4
b	-0.0_393	4
Ref. Index n_D 20°C	1.4004	2
25	1.3976	2
30	1.3945	4
"C"	0.7778	4
MR (Obs.)	29.75	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0573	4
Dielectric		
A -9 to 108 °C	6.89488	5
B	1178.1	5
C	226.	5
A* -9 to 83 °C	1.25698	5
B*	1101.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 108 to t_c °C	7.3157	5
Bc	1476.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	73.28	5

		Ref.
dt/dP °C/mm 25°C	0.1451	5
BP	0.0418	5
t_e	0.0362	5
30 mm	0.5811	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.87	5
30 mm	94.73	5
BP	81.84	5
t_e	80.84	5
t_e (d, e)	80.82	5
ΔHv/T_e	19.64	5
d -9 to 73 °C	93.24	5
e	0.1695	5
d' to °C		
e'		
d_c g/ml	0.237	5
v_c ml/g	4.216	5
t_c °C	235.	5
P_c mm	23580.	5
PV/RT 25°C	0.9837	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9486	5
t_c	0.264	5
ΔHc kcal/m	896.14	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36147	2
400	0.46343	2
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	-0.0144	4
n		0.0014	4
o		-0.0_658	4
m'	700 to 1000 °K	0.0644	4
n'		0.0012	4
o'		-0.0_642	4
Surface tension dynes/cm. γ 20°C		19.32	5
30		18.22	5
40		17.16	5
Parachor [P] 20°C			
30			
40			
Sugd.		257.3	5
Exp. L. l. %/wt. u.			
Dispersion		131.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 22

NAME	3-Methyl-cis-2-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12} / Molecular Weight 84.156	$CH_3CH_2C = CHCH_3$ / CH_3

		Ref.
F.P. °C	-138.445	2
F.P. 100%		
B.P. °C 760 mm	70.45	2
100	17.21	4
30	-6.21	4
10	-23.95	4
1	-53.19	4
Pressure mm 25°C	140.97	4
t_e	923.5	4
Density g/ml 20°C	0.6986	2
d_4^t 25	0.6942	2
30	0.6898	4
a	0.7162	4
b	-0.0_3855	4
Ref. Index n_D 20°C	1.4045	2
25	1.4018	2
30	1.3990	4
"C"	0.7715	5
MR (Obs.)	29.49	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0552	2
Dielectric		
A (-6 to 114 °C)	6.8985	5
B	1189.5	5
C	225.6	5
A* (-6 to 87 °C)	1.25784	5
B*	1113.9	5
K		
c		
t_k to		
t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (114 to t_c °C)	7.3195	5
Bc	1492.3	5
Cc	266.4	5
Cryos. consts. A°		
B°		
t_e °C	76.82	5

		Ref.
dt/dP °C/mm 25°C	0.1627	5
BP	0.0421	4
t_e	0.0362	5
30 mm	0.5859	5
ΔHm cal/g		
ΔHv cal/g 25°C	89.77	5
30 mm	95.77	5
BP	82.73	5
t_e	81.67	5
t_e (d, e)	81.64	5
ΔHv/T_e	19.64	5
d (-6 to 77 °C)	94.71	5
e	0.1701	5
d' to °C		
e'		
d_c g/ml	0.242	5
v_c ml/g	4.140	5
t_c °C	243.	5
P_c mm	24391.	5
PV/RT 25°C	0.9815	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9483	5
t_c	0.264	5
ΔHc kcal/m	896.78	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36147	2
400	0.46343	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	-0.0144	4
n	0.0014	4
o	-0.0_658	4
m' (700 to 1000 °K)	0.0644	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	20.75	5
30	19.69	5
40	18.65	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt.		
u.		
Dispersion	131.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	3-Methyl-trans-2-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156

Structural formula: $CH_3CH_2C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C	-134.840	2
F.P. 100%		
B.P. °C 760 mm	67.63	2
100	14.77	4
30	-8.48	4
10	-26.09	5
1	-55.11	5
Pressure mm 25°C	158.	5
t_e	915.	5
Density g/ml 20°C	0.6942	2
d^t_4 25	0.6898	2
30	0.6854	4
a	0.7119	4
b	-0.0_386	4
Ref. Index n_D 20°C	1.4016	2
25	1.3989	2
30	1.3962	4
"C"	0.7712	4
MR (Obs.)	29.49	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0545	4
Dielectric		
A (-8 to 110 °C)	6.89552	5
B	1179.4	5
C	226.	5
A* (-8 to 84 °C)	1.25531	5
B*	1103.0	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (110 to t_c °C)	7.3167	5
Bc	1480.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	73.66	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1468	5
BP	0.0418	5
t_e	0.0362	5
30 mm	0.5816	5
ΔHm cal/g		
ΔHv cal/g 25°C	89.07	5
30 mm	94.85	5
BP	82.38	5
t_e	80.94	5
t_e (d, e)	80.92	5
$\Delta Hv/T_e$	19.64	5
d (-8 to 74 °C)	93.46	5
e	0.1638	5
d' to °C		
e'		
d_c g/ml	0.241	5
v_c ml/g	4.151	5
t_c °C	238.	5
P_c mm	24093.	5
PV/RT 25°C	0.9823	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9486	5
t_c	0.264	5
ΔHc kcal/m	896.78	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36147	2
400	0.46343	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	-0.0144	4
n	0.0014	4
o	-0.0_658	4
m' (700 to 1000 °K)	0.0644	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	20.22	5
30	19.18	5
40	18.15	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. 1.%/wt. u.		
Dispersion	131.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_C$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	4-Methyl-cis-2-pentene	STRUCTURAL FORMULA
		$CH_3CH\ CH{=}CHCH_3$ (with CH_3 on the second carbon)

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_6H_{12}	84.156

		Ref.
F.P. °C	-134.430	2
F.P. 100%		
B.P. °C 760 mm	56.30	2
100	4.96	4
30	-17.60	4
10	-34.69	5
1	-62.82	5
Pressure mm 25°C	243.	5
t_e	883.	5
Density g/ml 20°C	0.6690	2
d^t_4 25	0.6642	2
30	0.6593	4
a	0.6884	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.3880	2
25	1.3849	2
30	1.3820	4
"C"	0.7746	4
MR (Obs.)	29.68	2
MR (Calc.)	28.978	5
(nD-d/2)	1.0535	4
Dielectric		
A (-18 to 94 °C)	6.88274	5
B	1139.0	5
C	228.	5
A* (-18 to 71 °C)	1.25914	5
B*	1064.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (94 to t_c °C)	7.3041	5
Bc	1427.	5
Cc	267.	5
Cryos. consts. A°		
B°		
t_e °C	61.01	5

		Ref.
dt/dP °C/mm 25°C	0.1005	5
BP	0.0406	5
t_e	0.0361	5
30 mm	0.5643	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.81	5
30 mm	91.13	5
BP	78.78	5
t_e	78.01	5
t_e (d, e)	77.99	5
$\Delta Hv/T_e$	19.64	5
d (-18 to 61 °C)	88.19	5
e	0.1671	5
d' to		
e' °C		
d_c g/ml	0.234	5
v_c ml/g	4.265	5
t_c °C	217.	5
P_c mm	22487.	5
PV/RT 25°C	0.9764	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9496	5
t_c	0.264	5
ΔHc kcal/m	897.84	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300 °K	0.38108	2
400	0.48125	2
c_v vap.		

		Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	-0.0000	4
n	0.0015	4
o	-0.0_667	4
m' (700 to 1000 °K)	0.1236	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	17.41	5
30	16.38	5
40	15.37	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt. u.		
Dispersion	126.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	4-Methyl-trans-2-pentene

Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156

STRUCTURAL FORMULA

$$CH_3\underset{\displaystyle CH_3}{\underset{|}{C}H}\ CH{=}CH\ CH_3$$

Property	Value	Ref.
F.P. °C	-140.810	2
F.P. 100%		
B.P. °C 760 mm	58.55	2
100	6.91	4
30	-15.78	4
10	-32.98	5
1	-61.28	5
Pressure mm 25°C	224.	5
t_e	889.	5
Density g/ml 20°C	0.6686	2
d_4^t 25	0.6638	2
30	0.6590	4
a	0.6879	4
b	$-0.0_{3}92$	4
Ref. Index n_D 20°C	1.3889	2
25	1.3859	2
30	1.2831	4
"C"	0.7768	4
MR (Obs.)	29.76	2
MR (Calc.)	29.441	5
(nD-d/2)	1.0546	4
Dielectric		
A (-20 to 97 °C)	6.88584	5
B	1147.1	5
C	227.9	5
A* (-20 to 70 °C)	1.25965	5
B*	1073.8	5
K		
c		
t_k to t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (97 to t_c °C)	7.3069	5
Bc	1437.	5
Cc	267.	5
Cryos. consts. A°		
B°		
t_e °C	63.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1083	5
BP	0.0409	4
t_e	0.0361	5
30 mm	0.5677	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.88	5
30 mm	91.88	5
BP	79.41	5
t_e	78.60	5
t_e (d, e)	78.58	5
$\Delta Hv/T_e$	19.64	5
d (-10 to 70 °C)	89.23	5
e	0.1677	5
d' to		
e' °C		
d_c g/ml	0.234	5
v_c ml/g	4.28	5
t_c °C	220.	5
P_c mm	22557.	5
PV/RT 25°C	0.9814	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9494	5
t_c	0.264	5
ΔHc kcal/m	896.84	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.40330	2
400	0.49788	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m (300 to 600 °K)	0.0441	4
n	0.0014	4
o	$-0.0_{6}63$	4
m' (700 to 1000 °K)	0.1393	4
n'	0.0011	4
o'	$-0.0_{6}36$	4
Surface tension dynes/cm. γ 20°C	17.37	5
30	16.35	5
40	15.35	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. l. %/wt. u.		
Dispersion	128.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 26

NAME	2-Ethyl-1-butene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12} — Molecular Weight 84.156 — $CH_3(CH_2)C = CH_2$ / C_2H_5

Property	Value	Ref.
F.P. °C	-131.530	2
F.P. 100%		
B.P. °C 760 mm	64.66	2
100	12.22	4
30	-10.84	4
10	-28.32	5
1	-57.10	5
Pressure mm 25°C	177.	5
t_e	907.	5
Density g/ml 20°C	0.6894	2
d^t_4 25	0.6847	2
30	0.6800	4
a	0.7083	4
b	-0.0_391	4
Ref. Index n_D 20°C	1.3969	2
25	1.3941	2
30	1.3912	4
"C"	0.7680	4
MR (Obs.)	29.390	2
MR (Calc.)	29.441	5
(nD-d/2)	1.0522	2
Dielectric		
A (-5 to 106 °C)	6.89411	5
B	1169.4	5
C	226.7	5
A* (-5 to 90 °C)	1.26041	5
B*	1094.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (106 to t_c °C)	7.3153	5
Bc	1466.	5
Cc	267.	5
Cryos. consts. A°		
B°		
t_e °C	70.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1328	5
BP	0.0415	4
t_e	0.0361	5
30 mm	0.5769	5
ΔHm cal/g		
ΔHv cal/g 25°C	87.83	5
30 mm	93.91	5
BP	81.15	5
t_e	80.21	5
t_e (d, e)	80.19	5
$\Delta Hv/T_e$	19.65	5
d (-5 to 75 °C)	92.08	5
e	0.1690	5
d' to		
e' °C		
d_c g/ml	0.240	5
v_c ml/g	4.15	5
t_c °C	232.	5
P_c mm	23699.	5
PV/RT 25°C	0.9844	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9488	5
t_c	0.263	5
ΔHc kcal/m	898.18	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300 °K	0.38120	2
400	0.48363	2
c_v vap.		

Property	Value	Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	-0.0060	4
n	0.0015	4
o	-0.0_667	4
m' (700 to 1000 °K)	0.1283	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	19.66	5
30	18.57	5
40	17.50	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L. 1.%/wt.		
u.		
Dispersion	128.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	2,3-Dimethyl-1-butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{12} / Molecular Weight 84.156	$CH_3CH(CH_3)C(CH_3)=CH_2$

Property	Value	Ref.
F.P. °C	-157.27	2
F.P. 100%		
B.P. °C 760 mm	55.67	2
100	4.41	4
30	-18.11	4
10	-35.17	5
1	-63.25	5
Pressure mm 25°C	249.	5
t_e	881.	5
Density g/ml 20°C	0.6779	2
d_4^t 25	0.6731	2
30	0.6682	4
a	0.6973	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.3904	2
25	1.3874	2
30	1.3845	4
"C"	0.7689	4
MR (Obs.)	29.45	2
MR (Calc.)	29.441	5
(nD-d/2)	1.0515	2
Dielectric		
A -15 to 94 °C	6.88200	5
B	1136.7	5
C	228.4	5
A* -15 to 80 °C	1.25939	5
B*	1063.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 94 to t_c °C	7.3038	5
Bc	1425.	5
Cc	267.	5
Cryos. consts. A°		
B°		
t_e °C	60.31	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0985	5
BP	0.0406	4
t_e	0.0361	5
30 mm	0.5633	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.74	5
30 mm	90.92	5
BP	78.61	5
t_e	77.85	5
t_e (d,e)	77.84	5
ΔHv/T_e	19.64	5
d -15 to 70 °C	87.90	5
e	0.1669	5
d' to °C		
e'		
d_c g/ml	0.238	5
v_c ml/g	4.20	5
t_c °C	217.	5
P_c mm	22833.	5
PV/RT 25°C	0.9919	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9497	5
t_c	0.264	2
ΔHc kcal/m	896.32	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.40924	2
400	0.50620	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0285	4
n	0.0015	4
o	-0.0_675	4
m' 700 to 1000 °K	0.1113	4
n'	0.0012	4
o'	-0.0_642	4
Surface tension dynes/cm. γ 20°C	18.35	5
30	17.28	5
40	16.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt.		
u.		
Dispersion	129.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	3,3-Dimethyl-1-butene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12} / Molecular Weight 84.156	CH_3 / CH_3C CH=CH_2 / CH_3

Property	Value	Ref.
F.P. °C	-115.20	2
F.P. 100%		
B.P. °C 760 mm	41.24	2
100	-8.26	4
30	-29.96	4
10	-46.38	5
1	-73.36	5
Pressure mm 25°C	425.9	5
t_e	841.0	5
Density g/ml 20°C	0.6529	2
d_4^t 25	0.6479	2
30	0.6429	4
a	0.6732	4
b	-0.0_393	4
Ref. Index n_D 20°C	1.3760	2
25	1.3730	2
30	1.3699	4
"C"	0.7705	4
MR (Obs.)	29.58	2
MR (Calc.)	29.441	5
(nD-d/2)	1.0495	2
Dielectric		
A -30 to 76 °C	6.84763	5
B	1080.6	5
C	231.	5
A* -30 to 54 °C	1.24167	5
B*	1010.1	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 76 to t_c °C	7.2704	5
Bc	1356.	5
Cc	268.	5
Cryos. consts. A°		
B°		
t_e °C	44.29	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0619	5
BP	0.0392	4
t_e	0.0363	5
30 mm	0.5424	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.42	5
30 mm	85.87	5
BP	74.36	5
t_e	73.87	5
t_e (d,e)	73.86	5
ΔHv/T_e	19.58	5
d -30 to 50 °C	81.02	5
e	0.1616	5
d' to °C		
e'		
d_c g/ml	0.230	5
v_c ml/g	4.348	5
t_c °C	192.	5
P_c mm	21009.	5
PV/RT 25°C	0.9752	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9521	5
t_c	0.265	5
ΔHc kcal/m	896.85	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36112	2
400	0.46224	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600°K	0.0071	4
n	0.0013	4
o	-0.0_642	4
m' 700 to 1000°K	-0.0237	4
n'	0.0014	4
o'	-0.0_659	4
Surface tension dynes/cm. γ 20°C	15.72	5
30	14.71	5
40	13.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 29

NAME	2,3-Dimethyl-2-butene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156	$CH_3C=C(CH_3)-CH_3$ with CH_3 on first carbon

Property	Value	Ref.
F.P. °C	-74.280	2
F.P. 100%		
B.P. °C 760 mm	73.21	2
100	19.63	4
30	-3.95	4
10	-21.82	5
1	-51.26	5
Pressure mm 25°C	127.	5
t_e	931.	5
Density g/ml 20°C	0.7080	2
d_4^t 25	0.7034	2
30	0.6988	4
a	0.7264	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.4122	2
25	1.4094	2
30	1.4065	4
"C"	0.7750	4
MR (Obs.)	29.59	2
MR (Calc.)	29.441	5
(nD-d/2)	1.0582	2
Dielectric		
A (-10 to 118 °C)	6.90393	5
B	1200.1	5
C	225.	5
A* (-10 to 90 °C)	1.25993	5
B*	1124.0	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (118 to t_c °C)	7.3249	5
Bc	1506.	5
Cc	266.	5
Cryos. consts. A°		
B°		
t_e °C	79.91	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1776	5
BP	0.0424	4
t_e	0.0361	5
30 mm	0.5899	5
ΔHm cal/g		
ΔHv cal/g 25°C	90.14	5
30 mm	96.73	5
BP	83.55	5
t_e	82.44	5
t_e (d, e)	82.41	5
$\Delta Hv/T_e$	19.65	5
d (-10 to 90 °C)	96.06	5
e	0.1708	5
d' to °C		
e'		
d_c g/ml	0.246	5
v_c ml/g	4.06	5
t_c °C	248.	5
P_c mm	24865.	5
PV/RT 25°C	0.9725	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9481	5
t_c	0.264	5
ΔHc kcal/m	895.19	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36397	2
400	0.45867	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0464	4
n	0.0011	4
o	-0.0_628	4
m' (700 to 1000 °K)	0.0157	4
n'	0.0013	4
o'	-0.0_648	4
Surface tension dynes/cm. γ 20°C	21.90	5
30	20.75	5
40	19.63	5
Parachor [P] 20°C		
30		
40		
Sugd.	257.3	5
Exp. L.1.%/wt. u.		
Dispersion	132.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	1-Heptene	STRUCTURAL FORMULA
		$CH_3(CH_2)_4CH{=}CH_2$

Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

		Ref.
F.P. °C	-119.029	2
F.P. 100%		
B.P. °C 760 mm	93.643	2
100	37.418	2
30	12.68	2
10	-6.07	2
1	-36.95	5
Pressure mm 25°C	56.33	5
t_e	987.5	5
Density g/ml 20°C	0.69698	2
d_4^t 25	0.69267	2
30	0.68829	4
a	0.71432	4
b	-0.0_3855	4
Ref. Index n_D 20°C	1.39980	2
25	1.39713	2
30	1.39451	4
"C"	0.7648	4
MR (Obs.)	34.135	2
MR (Calc.)	34.059	5
(nD-d/2)	1.05131	2
Dielectric		
A 10 to 128 °C	6.90069	2
B	1257.505	2
C	219.18	2
A* 10 to 113 °C	1.30572	5
B*	1179.6	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 128 to t_c °C	7.3119	5
Bc	1560.	5
Cc	259.	5
Cryos. consts. A°		
B°		
t_e °C	102.75	5

		Ref.
dt/dP °C/mm 25°C	0.3655	5
BP	0.04447	4
t_e	0.03624	5
30 mm	0.6189	5
ΔHm cal/g		
ΔHv cal/g 25°C	87.79	5
30 mm	89.09	5
BP	76.31	5
t_e	74.93	5
t_e (d, e)	74.87	5
ΔHv/T_e	19.57	5
d 10 to 110 °C	91.10	5
e	0.1579	5
d' to °C		
e'		
d_c g/ml	0.235	5
v_c ml/g	4.247	5
t_c °C	262.	5
P_c mm	20813.	5
PV/RT 25°C	0.9966	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9441	5
t_c	0.260	5
ΔHc kcal/m	1048.05	2
ΔHf		
ΔFf		
Viscosity centistokes η 0 °C	0.44	2
20	0.35	2
40	0.29	2
80	0.22	2
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37960	2
400	0.47840	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0251	4
n	0.0013	4
o	-0.0_648	4
m' 700 to 1000 °K	0.1118	4
n'	0.0011	4
o'	-0.0_637	4
Surface tension dynes/cm. γ 20°C	19.52	5
30	18.55	5
40	17.60	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	118.2	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	cis-2-Heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_3CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	98.5	2
100	41.62	4
30	16.53	4
10	-2.50	5
1	-33.90	5
Pressure mm 25°C	45.64	5
t_e	1001.	5
Density g/ml 20°C	0.708	2
d^t_4 25	0.704	2
30	0.700	4
a	0.724	4
b	-0.038	4
Ref. Index n_D 20°C	1.406	2
25	1.403	2
30	1.401	4
"C"	0.7640	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.052	2
Dielectric		
A 12 to 135 °C	6.93647	5
B	1292.9	5
C	220.	5
A* 12 to 118 °C	1.33477	5
B*	1213.1	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 135 to t_c °C	7.3513	5
Bc	1605.	5
Cc	261.	5
Cryos. consts. A°		
B°		
t_e °C	108.18	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4366	5
BP	0.0449	4
t_e	0.0362	5
30 mm	0.6280	5
ΔHm cal/g		
ΔHv cal/g 25°C	90.00	5
30 mm	90.19	5
BP	77.53	5
t_e	76.09	5
t_e (d, e)	76.04	5
ΔHv/T_e	19.59	5
d 12 to 115 °C	92.74	5
e	0.1544	5
d' to °C		
e'		
d_c g/ml	0.247	5
v_c ml/g	4.054	5
t_c °C	272.	5
P_c mm	21783.	5
PV/RT 25°C	0.9976	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9432	5
t_c	0.255	5
ΔHc kcal/m	1046.45	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.79	5
30	19.84	5
40	18.91	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. 1. %/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 32

NAME	trans-2-Heptene	STRUCTURAL FORMULA
		$CH_3(CH_2)_3CH{=}CHCH_3$

Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Property	Value	Ref.
F.P. °C	-109.480	2
F.P. 100%		
B.P. °C		
760 mm	97.95	2
100	41.12	4
30	16.06	4
10	-2.96	5
1	-34.31	5
Pressure mm 25°C	46.55	5
t_e	999.3	5
Density g/ml 20°C	0.7012	2
d^t_4 25	0.6969	2
30	0.6926	4
a	0.7183	4
b	-0.0385	4
Ref. Index		
n_D 20°C	1.4045	2
25	1.4020	2
30	1.3992	4
"C"	0.7687	4
MR (Obs.)	34.28	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0539	2
Dielectric		
A (16 to 134 °C)	6.93364	5
B	1290.2	5
C	220.	5
A* (16 to 118 °C)	1.33255	5
B*	1210.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (134 to t_c °C)	7.3482	5
Bc	1600.	5
Cc	261.	5
Cryos. consts. A°		
B°		
t_e °C	107.57	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	0.4274	5
BP	0.0449	4
t_e	0.0362	5
30 mm	0.6273	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.18	5
30 mm	89.99	5
BP	77.35	5
t_e	75.91	5
t_e (d,e)	75.87	5
$\Delta Hv/T_e$	19.57	5
d (16 to 108 °C)	92.46	5
e	0.1543	5
d' to		
e' °C		
d_c g/ml	0.243	5
v_c ml/g	4.120	5
t_c °C	269.	5
P_c mm	21316.	5
PV/RT		
25°C	0.9972	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9433	5
t_c	0.255	5
ΔHc kcal/m	1045.45	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.00	5
30	19.03	5
40	18.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 33

NAME	cis-3-Heptene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182
		$CH_3CH_2CH=CH(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	95.75	2
100	39.21	4
30	14.29	4
10	-4.62	5
1	-35.81	5
Pressure mm 25°C	52.36	5
t_e	993.0	5
Density g/ml 20°C	0.7030	2
d^t_4 25	0.6987	2
30	0.6944	4
a	0.7202	4
b	-0.0_385	4
Ref. Index n_D 20°C	1.4059	2
25	1.4033	2
30	1.4006	4
"C"	0.7692	4
MR (Obs.)	34.30	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0544	2
Dielectric		
A (14 to 131 °C)	6.93161	5
B	1282.3	5
C	221.	5
A* (14 to 115 °C)	1.33298	5
B*	1203.1	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (131 to t_c °C)	7.3464	5
Bc	1591.	5
Cc	261.	5
Cryos. consts. A° B°		
t_e °C	105.09	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3945	5
BP	0.0447	4
t_e	0.0362	5
30 mm	0.6239	5
ΔHm cal/g		
ΔHv cal/g 25°C	87.77	5
30 mm	89.36	5
BP	76.83	5
t_e	75.44	5
t_e (d, e)	75.39	5
$\Delta Hv/T_e$	19.58	5
d (14 to 105 °C)	91.56	5
e	0.1539	5
d' to e' °C		
d_c g/ml	0.244	5
v_c ml/g	4.096	5
t_c °C	266.	5
P_c mm	21322.	5
PV/RT 25°C	0.9983	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9435	5
t_c	0.255	5
ΔHc kcal/m	1046.45	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.21	5
30	19.22	5
40	18.26	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	trans-3-Heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_2CH{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C	-136.63	2
F.P. 100%		
B.P. °C 760 mm	95.67	2
100	39.13	4
30	14.04	4
10	-4.70	5
1	-35.88	5
Pressure mm 25°C	52.50	5
t_e	993.	5
Density g/ml 20°C	0.6981	2
d_4^t 25	0.6938	2
30	0.6895	4
a	0.7152	4
b	-0.0385	4
Ref. Index n_D 20°C	1.4043	2
25	1.4017	2
30	1.3989	4
"C"	0.7717	4
MR (Obs.)	34.42	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0553	2
Dielectric		
A (10 to 131 °C)	6.93075	5
B	1281.8	5
C	221.	5
A* (10 to 115 °C)	1.32366	5
B*	1200.5	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (131 to t_c °C)	7.3454	5
Bc	1590.	5
Cc	261.	5
Cryos. consts. A° B°		
t_e °C	105.03	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3933	5
BP	0.0447	4
t_e	0.0362	5
30 mm	0.6239	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.77	5
30 mm	89.22	5
BP	76.79	5
t_e	75.40	5
t_e (d, e)	75.37	5
ΔHv/T_e	19.57	5
d (10 to 110 °C)	91.36	5
e	0.1523	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	266.	5
P_c mm	21116.	5
PV/RT 25°C	0.9984	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9435	5
t_c	0.255	5
ΔHc kcal/m	1045.45	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.65	5
30	18.68	5
40	17.79	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.I.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 35

NAME	2-Methyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_3C = CH_2$ (with CH_3 on C)

Property	Value	Ref.
F.P. °C	-102.840	2
F.P. 100%		
B.P. °C 760 mm	92.00	2
100	35.93	4
30	11.22	4
10	-7.52	5
1	-38.42	5
Pressure mm 25°C	60.48	5
t_e	982.3	5
Density g/ml 20°C	0.7030	2
d^t_4 25	0.6986	2
30	0.6942	4
a	0.7206	4
b	-0.0387	4
Ref. Index n_D 20°C	1.4034	2
25	1.4007	2
30	1.3979	4
"C"	0.7647	4
MR (Obs.)	34.11	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0520	2
Dielectric		
A 5 to 127 °C	6.92518	5
B	1268.0	5
C	221.52	5
A* 5 to 110 °C	1.33076	5
B*	1189.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 127 to t_c °C	7.3403	5
Bc	1574.	5
Cc	261.	5
Cryos. consts. A°		
B°		
t_e °C	100.88	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3442	5
BP	0.0443	4
t_e	0.03624	5
30 mm	0.6184	5
ΔHm cal/g		
ΔHv cal/g 25°C	89.66	5
30 mm	88.25	5
BP	75.88	5
t_e	74.56	5
t_e (d, e)	74.52	5
$\Delta Hv/T_e$	19.57	5
d 5 to 110 °C	89.97	5
e	0.1531	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	261.	5
P_c mm	21115.	5
PV/RT 25°C	0.9962	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9438	5
t_c	0.255	5
ΔHc kcal/m	1044.44	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.20	5
30	19.19	5
40	18.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ [+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 36

NAME	3-Methyl-1-hexene	STRUCTURAL FORMULA
		$CH_3(CH_2)_2CH(CH_3)CH=CH_2$
Mole % Pur. / Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	84.	2
100	28.99	4
30	4.76	4
10	-13.61	5
1	-43.90	5
Pressure mm 25°C	83.37	5
t_e	960.	5
Density g/ml 20°C	0.695	2
d_4^t 25	0.691	2
30	0.687	4
a	0.7108	4
b	-0.0377	4
Ref. Index n_D 20°C	1.397	2
25	1.394	2
30	1.392	4
"C"	0.7619	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.049	2
Dielectric		
A (5 to 118 °C)	6.91598	4
B	1239.0	4
C	223.04	4
A* (5 to 102 °C)	1.32981	5
B*	1161.66	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (118 to t_c °C)	7.3318	5
Bc	1539.	5
Cc	262.	5
Cryos. consts. A°		
B°		
t_e °C	91.92	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2587	5
BP	0.0435	4
t_e	0.0362	5
30 mm	0.6063	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.03	5
30 mm	85.97	5
BP	73.99	5
t_e	72.82	5
t_e (d, e)	72.79	5
$\Delta Hv/T_e$	19.58	5
d (5 to 92 °C)	86.69	5
e	0.1512	5
d' to °C		
e'		
d_c g/ml	0.241	5
v_c ml/g	4.142	5
t_c °C	249.	5
P_c mm	20818.	5
PV/RT 25°C	0.9956	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9450	5
t_c	0.260	5
ΔHc kcal/m	1046.98	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.29	5
30	18.40	5
40	17.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 37

NAME	4-Methyl-1-hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182	$CH_3CH_2CH(CH_3)CH_2CH=CH_2$

		Ref.
F.P. °C	-141.45	2
F.P. 100%		
B.P. °C 760 mm	86.73	2
100	31.38	4
30	6.99	4
10	-11.51	5
1	-42.00	5
Pressure mm 25°C	74.69	5
t_e	967.8	5
Density g/ml 20°C	0.6985	2
d_4^t 25	0.6942	2
30	0.6899	4
a	0.7156	4
b	-0.0₃84	4
Ref. Index n_D 20°C	1.4000	2
25	1.3973	2
30	1.3947	4
"C"	0.7635	4
MR (Obs.)	34.08	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0508	2
Dielectric		
A 7 to	6.92084	4
B 121 °C	1249.38	4
C	222.52	4
A* 7 to	1.33154	5
B* 105 °C	1171.6	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 121 to	7.3364	5
Bc t_c °C	1551.	5
Cc	262.	5
Cryos. consts. A°		
B°		
t_e °C	94.98	5

		Ref.
dt/dP °C/mm 25°C	0.2851	5
BP	0.0437	4
t_e	0.0362	5
30 mm	0.6103	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.06	5
30 mm	86.78	5
BP	74.68	5
t_e	73.46	5
t_e (d, e)	73.43	5
ΔHv/T_e	19.59	5
d 7 to	87.84	5
e 95 °C	0.1517	5
d' to		
e' °C		
d_c g/ml	0.241	5
v_c ml/g	4.152	5
t_c °C	252.	5
P_c mm	20890.	5
PV/RT 25°C	0.9945	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9448	5
t_c	0.260	5
ΔHc kcal/m	1046.98	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	19.68	5
γ 30	18.71	5
40	17.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 38

NAME	5-Methyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH(CH_2)_2CH=CH_2$ (with CH_3 on C-2)

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	85.31	2
100	30.13	4
30	5.82	4
10	-12.61	5
1	-42.99	5
Pressure mm 25°C	79.11	5
t_e	963.7	5
Density g/ml 20°C	0.6920	2
d_4^t 25	0.6876	2
30	0.6832	4
a	0.7095	4
b	-0.0_386	4
Ref. Index n_D 20°C	1.3966	2
25	1.3940	2
30	1.3911	4
"C"	0.7645	4
MR (Obs.)	34.12	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0506	2
Dielectric		
A (0 to 119 °C)	6.91781	4
B	1243.80	4
C	222.79	4
A* (0 to 100 °C)	1.33013	5
B*	1166.27	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (119 to t_c °C)	7.3332	5
Bc	1544.	5
Cc	262.	5
Cryos. consts. A°		
B°		
t_e °C	93.39	5

		Ref.
dt/dP °C/mm 25°C	0.2710	5
BP	0.0436	4
t_e	0.0362	5
30 mm	0.6083	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.45	5
30 mm	86.35	5
BP	74.31	5
t_e	73.11	5
t_e (d, e)	73.08	5
ΔHv/T_e	19.58	5
d (0 to 100 °C)	87.23	5
e	0.1515	5
d' to °C		
e'		
d_c g/ml	0.249	5
v_c ml/g	4.202	5
t_c °C	249.	5
P_c mm	20522.	5
PV/RT 25°C	0.9941	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9449	5
t_c	0.260	5
ΔHc kcal/m	1046.34	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	18.96	5
30	17.99	5
40	17.05	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.l.%/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	2-Methyl-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} — Molecular Weight 98.182	$CH_3(CH_2)_2CH{=}C(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-130.350	2
F.P. 100%		
B.P. °C		
760 mm	95.41	2
100	38.91	4
30	14.01	4
10	-48.87	5
1	-36.05	5
Pressure mm 25°C	52.60	5
t_e	991.4	5
Density g/ml 20°C	0.7082	2
d^t_4 25	0.7038	2
30	0.6994	4
a	0.7257	4
b	-0.0_386	4
Ref. Index n_D 20°C	1.4106	2
25	1.4079	2
30	1.4052	4
"C"	0.7719	4
MR (Obs.)	34.39	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0565	2
Dielectric		
A 14 to	6.93104	4
B 132 °C	1281.02	4
C	220.87	4
A* 14 to	1.33367	5
B* 110 °C	1202.03	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 132 to	7.3460	5
Bc t_c °C	1590.	5
Cc	261.	5
Cryos. A° consts. B°		
t_e °C	104.69	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	0.3897	5
BP	0.0446	4
t_e	0.0362	5
30 mm	0.6234	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.56	5
30 mm	89.26	5
BP	76.71	5
t_e	75.32	5
t_e (d, e)	75.27	5
ΔHv/T_e	19.57	5
d 14 to	91.42	5
e 110 °C	0.1543	5
d' to		
e' °C		
d_c g/ml	0.242	5
v_c ml/g	4.13	5
t_c °C	266.	5
P_c mm	21467.	5
PV/RT		
25°C	0.9972	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9430	5
t_c	0.259	5
ΔHc kcal/m	1043.04	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	20.81	5
γ 30	19.79	5
40	18.79	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 40

NAME	3-Methyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_2C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	94.	2
100	37.68	4
30	12.85	4
10	-5.98	5
1	-37.04	5
Pressure mm 25°C	55.75	5
t_e	987.4	5
Density g/ml 20°C	0.7120	2
d_4^t 25	0.7080	2
30	0.7039	4
a	0.7282	4
b	-0.0₃80	4
Ref. Index n_D 20°C	1.410	2
25	1.407	2
30	1.405	4
"C"	0.7667	4
MR (Obs.)	34.2	2
MR (Calc.)	34.059	5
(nD-d/2)	1.054	2
Dielectric		
A (5 to 131 °C)	6.92821	4
B	1275.50	4
C	221.14	4
A* (5 to 115 °C)	1.33242	5
B*	1196.77	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (131 to t_c °C)	7.3437	5
Bc	1585.	5
Cc	262.	5
Cryos. consts. A° B°		
t_e °C	103.11	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3700	5
BP	0.0445	4
t_e	0.0363	5
30 mm	0.6214	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.96	5
30 mm	88.84	5
BP	76.35	5
t_e	74.99	5
t_e (d, e)	74.95	5
$\Delta Hv/T_e$	19.57	5
d (5 to 115 °C)	90.81	5
e	0.1539	5
d' e' to °C		
d_c g/ml	0.245	5
v_c ml/g	4.08	5
t_c °C	266.	5
P_c mm	21745.	5
PV/RT 25°C	0.9967	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9431	5
t_c	0.259	5
ΔHc kcal/m	1043.68	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.26	5
30	20.29	5
40	19.34	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 41

NAME	3-Methyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_2C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	94.	2
100	37.68	4
30	12.85	4
10	-5.98	5
1	-37.04	5
Pressure mm 25°C	55.75	5
t_e	987.4	5
Density g/ml 20°C	0.7120	2
d_4^t 25	0.7080	2
30	0.7039	4
a	0.7282	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.410	2
25	1.407	2
30	1.405	4
"C"	0.7667	4
MR (Obs.)	34.2	2
MR (Calc.)	34.059	5
(nD-d/2)	1.054	2
Dielectric		
A (5 to 131 °C)	6.92821	4
B	1275.50	4
C	221.14	4
A* (5 to 115 °C)	1.33242	5
B*	1196.77	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (131 to t_c °C)	7.3437	5
Bc	1585.	5
Cc	262.	5
Cryos. consts. A° B°		
t_e °C	103.11	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3700	5
BP	0.0445	4
t_e	0.0363	5
30 mm	0.6214	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.96	5
30 mm	88.84	5
BP	76.35	5
t_e	74.99	5
t_e (d, e)	74.95	5
$\Delta Hv/T_e$	19.57	5
d (5 to 115 °C)	90.81	5
e	0.1539	5
d' e' (to °C)		
d_c g/ml	0.245	5
v_c ml/g	4.08	5
t_c °C	266.	5
P_c mm	21745.	5
PV/RT 25°C	0.9967	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9431	5
t_c	0.259	5
ΔHc kcal/m	1043.68	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.26	5
30	20.29	5
40	19.34	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. 1. %/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 42

NAME	4-Methyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2CH(CH_3)CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	87.37	2
100	31.74	4
30	7.27	4
10	-11.3	5
1	-41.8	5
Pressure mm 25°C	73.49	5
t_e	969.6	5
Density g/ml 20°C d_4^t	0.6996	2
25	0.6953	2
30	0.6910	4
a	0.7168	4
b	-0.0385	4
Ref. Index n_D 20°C	1.4024	2
25	1.3997	2
30	1.3971	4
"C"	0.7667	4
MR (Obs.)	34.20	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0526	2
Dielectric		
A (0 to 122 °C)	6.89863	4
B	1243.0	4
C	222.	4
A* (0 to 110 °C)	1.30908	5
B*	1165.33	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (122 to t_c °C)	7.3136	5
Bc	1545.	5
Cc	261.	5
Cryos. consts. A° B°		
t_e °C	95.74	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2900	5
BP	0.0440	4
t_e	0.0364	5
30 mm	0.6122	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.01	5
30 mm	86.69	5
BP	74.50	5
t_e	73.26	5
t_e (d, e)	73.23	5
ΔHv/T_e	19.50	5
d (0 to 110 °C)	87.80	5
e	0.1521	5
d' e' to °C		
d_c g/ml	0.238	5
v_c ml/g	4.20	5
t_c °C	254.	5
P_c mm	20630.	5
PV/RT 25°C	0.9948	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9446	5
t_c	0.260	5
ΔHc kcal/m	1045.38	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.81	5
30	18.83	5
40	17.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.l.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 43

NAME	4-Methyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} — Molecular Weight 98.182	$CH_3CH{=}CHCH(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C	-126.5	2
F.P. 100%		
B.P. °C 760 mm	87.6	2
100	31.9	4
30	7.40	4
10	-11.2	5
1	-41.7	5
Pressure mm 25°C	72.99	5
t_e	970.3	5
Density g/ml 20°C	0.6975	2
d^t_4 25	0.6932	2
30	0.6889	4
a	0.7146	4
b	$-0.0_{3}84$	4
Ref. Index n_D 20°C	1.4023	2
25	1.3997	2
30	1.3970	4
"C"	0.7688	4
MR (Obs.)	34.30	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0536	2
Dielectric		
A (7 to 122 °C)	6.89566	4
B	1243.0	4
C	222.	4
A* (7 to 106 °C)	1.30573	5
B*	1165.24	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (122 to t_c °C)	7.3106	5
Bc	1545.	5
Cc	261.	5
Cryos. consts. A° B°		
t_e °C	96.01	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2920	5
BP	0.0441	4
t_e	0.0364	5
30 mm	0.6129	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.92	5
30 mm	86.67	5
BP	74.49	5
t_e	73.25	5
t_e (d,e)	73.21	5
ΔHv/T_e	19.48	5
d (7 to 96 °C)	87.80	5
e	0.1519	5
d' e' (to °C)		
d_c g/ml	0.236	5
v_c ml/g	4.244	5
t_c °C	254.	5
P_c mm	20512.	5
PV/RT 25°C	0.9943	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9446	5
t_c	0.260	5
ΔHc kcal/m	1044.38	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	19.57	5
30	18.61	5
40	17.66	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ — [+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 44

NAME	5-Methyl-cis-2-hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182	$CH_3CH(CH_3)CH_2CH=CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	91.	2
100	33.0	4
30	7.77	4
10	-11.3	5
1	-42.5	5
Pressure mm 25°C	70.05	5
t_e	980.8	5
Density g/ml 20°C	0.700	2
d_4^t 25	0.696	2
30	0.692	4
a	0.7161	4
b	-0.0_379	4
Ref. Index n_D 20°C	1.400	2
25	1.397	2
30	1.395	4
"C"	0.7619	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.050	2
Dielectric		
A 0 to	6.75578	4
B 127 °C	1212.86	4
C	222.	4
A* 0 to	1.16082	5
B* 110 °C	1133.96	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 127 to	7.1733	5
Bc t_c °C	1522.	5
Cc	264.	5
Cryos. A°		
consts. B°		
t_e °C	100.21	5

		Ref.
dt/dP °C/mm		
25°C	0.3119	5
BP	0.0462	4
t_e	0.0379	5
30 mm	0.6301	5
ΔHm cal/g		
ΔHv cal/g		
25°C	82.01	5
30 mm	84.52	5
BP	72.46	5
t_e	71.17	5
t_e (d, e)	71.13	5
ΔHv/T_e	18.71	5
d 0 to	85.65	5
e 110 °C	0.1449	5
d' to		
e' °C		
d_c g/ml	0.215	5
v_c ml/g	4.64	5
t_c °C	260.	5
P_c mm	18614.	5
PV/RT		
25°C	0.9956	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9441	5
t_c	0.255	5
ΔHc kcal/m	1044.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	19.85	5
30	18.94	5
40	18.04	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 45

NAME	5-Methyl-trans-2-hexene		STRUCTURAL FORMULA
Mole % Pur. Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182	$CH_3CH(CH_3)CH_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	86.	2
100	28.55	4
30	3.58	4
10	-15.2	5
1	-46.0	5
Pressure mm 25°C	85.52	5
t_e	966.5	5
Density g/ml 20°C	0.700	2
d_4^t 25	0.696	2
30	0.692	4
a	0.7161	4
b	-0.0_379	4
Ref. Index n_D 20°C	1.400	2
25	1.397	2
30	1.395	4
"C"	0.7619	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.050	2
Dielectric		
A 0 to 121 °C	6.72252	4
B	1183.25	4
C	222.	4
A* 0 to 110 °C	1.13430	5
B*	1105.83	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 121 to t_c °C	7.1390	5
Bc	1486.	5
Cc	263.	5
Cryos. consts. A° B°		
t_e °C	94.60	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2618	5
BP	0.0458	4
t_e	0.0381	5
30 mm	0.6226	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.92	5
30 mm	83.02	5
BP	71.01	5
t_e	69.81	5
t_e (d, e)	69.76	5
$\Delta Hv/T_e$	18.63	5
d 0 to 110 °C	83.54	5
e	0.1456	5
d' e' to °C		
d_c g/ml	0.211	5
v_c ml/g	4.74	5
t_c °C	253.	5
P_c mm	18186.	5
PV/RT 25°C	0.9942	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9445	5
t_c	0.258	5
ΔHc kcal/m	1043.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.85	5
30	18.93	5
40	18.02	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 46

NAME	2-Methyl-cis-3-hexene	STRUCTURAL FORMULA
		$CH_3CH\ CH{=}CH\ CH_2CH_3$ (with CH_3 on C-2)

Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	86.	2
100	28.6	4
30	3.58	4
10	-15.2	5
1	-46.0	5
Pressure mm 25°C	85.52	5
t_e	966.5	5
Density g/ml 20°C	0.694	2
d_4^t 25	0.690	2
30	0.686	4
a	0.710	4
b	-0.0_379	4
Ref. Index n_D 20°C	1.399	2
25	1.396	2
30	1.394	4
"C"	0.7667	4
MR (Obs.)	34.2	2
MR (Calc.)	34.059	5
(nD-d/2)	1.052	2
Dielectric		
A (-5 to 121 °C)	6.72252	4
B	1183.25	4
C	222.	4
A* (-5 to 110 °C)	1.13430	5
B*	1105.83	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (121 to t_c °C)	7.1388	5
Bc	1486.	5
Cc	263.	5
Cryos. consts. A°		
B°		
t_e °C	94.60	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2618	5
BP	0.0458	4
t_e	0.0381	5
30 mm	0.6226	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.89	5
30 mm	83.02	5
BP	71.01	5
t_e	69.80	5
t_e (d,e)	69.76	5
$\Delta Hv/T_e$	18.63	5
d (-5 to 110 °C)	83.54	5
e	0.1457	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	252.	5
P_c mm	17992.	5
PV/RT 25°C	0.9938	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9445	5
t_c		
ΔHc kcal/m	1044.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.17	5
30	18.28	5
40	17.40	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 47

NAME	2-Methyl-trans-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH(CH_3)CH{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	86.	2
100	28.6	4
30	3.58	4
10	-15.2	5
1	-46.0	5
Pressure mm 25°C	85.52	5
t_e	966.5	5
Density g/ml 20°C	0.694	2
d^t_4 25	0.690	2
30	0.686	4
a	0.710	4
b	-0.0379	4
Ref. Index n_D 20°C	1.399	2
25	1.396	2
30	1.394	4
"C"	0.7667	4
MR (Obs.)	34.2	2
MR (Calc.)	34.059	5
(nD-d/2)	1.052	2
Dielectric		
A (-5 to 121 °C)	6.72252	4
B	1183.25	4
C	222.	4
A* (-5 to 110 °C)	1.13430	5
B*	1105.83	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (121 to t_c °C)	7.1388	5
Bc	1486.	5
Cc	263.	5
Cryos. consts. A°		
B°		
t_e °C	94.60	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2618	5
BP	0.0458	4
t_e	0.0381	5
30 mm	0.6226	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.89	5
30 mm	83.02	5
BP	71.01	5
t_e	69.80	5
t_e (d, e)	69.76	5
$\Delta Hv/T_e$	18.63	5
d (-5 to 110 °C)	83.54	5
e	0.1457	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	252.	5
P_c mm	17992.	5
PV/RT 25°C	0.9938	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9445	5
t_c		
ΔHc kcal/m	1044.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.17	5
30	18.28	5
40	17.40	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_C$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 48

NAME	3-Methyl-cis-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2CH=C(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	95.35	2
100	36.9	4
30	11.46	4
10	-7.8	5
1	-39.3	5
Pressure mm 25°C	58.69	5
t_e	993.	5
Density g/ml 20°C	0.7132	2
d_4^t 25	0.7089	2
30	0.7046	4
a	0.7303	4
b	-0.0384	4
Ref. Index n_D 20°C	1.4123	2
25	1.4096	2
30	1.4070	4
"C"	0.7695	4
MR (Obs.)	34.28	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0557	2
Dielectric		
A (0 to 133 °C)	6.77018	4
B	1230.40	4
C	221.	4
A* (0 to 115 °C)	1.17140	5
B*	1151.0	5
K		
c		
t_k to t_x °C		
A' to B' °C, C'		
A'* to B'* °C		
Ac (133 to t_c °C)	7.1872	5
Bc	1543.	5
Cc	263.	5
Cryos. consts. A° B°		
t_e °C	105.07	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3640	5
BP	0.0465	4
t_e	0.0378	5
30 mm	0.6358	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.98	5
30 mm	85.99	5
BP	73.66	5
t_e	72.28	5
t_e (d, e)	72.23	5
$\Delta Hv/T_e$	18.76	5
d (0 to 115 °C)	87.67	5
e	0.1469	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	268.	5
P_c mm	19203.	5
PV/RT 25°C	0.9968	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9432	5
t_c		
ΔHc kcal/m	1043.68	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.40	5
30	20.38	5
40	19.37	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 49

NAME	3-Methyl-trans-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2CH{=}C(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	93.55	2
100	35.3	4
30	9.95	4
10	-9.2	5
1	-40.5	5
Pressure mm 25°C	63.13	5
t_e	987.5	5
Density g/ml 20°C	0.7099	2
d_4^t 25	0.7056	2
30	0.7013	4
a	0.7271	4
b	-0.0₃85	4
Ref. Index n_D 20°C	1.4107	2
25	1.4080	2
30	1.4053	4
"C"	0.7702	4
MR (Obs.)	34.32	2
MR (Calc.)	34.059	5
(n_D-d/2)	1.0558	2
Dielectric		
A 0 to 130 °C	6.75851	4
B	1219.73	4
C	221.	4
A* 0 to 110 °C	1.16211	5
B*	1140.86	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 130 to t_c °C	7.1751	5
Bc	1530.	5
Cc	263.	5
Cryos. consts. A°		
B°		
t_e °C	103.05	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3413	5
BP	0.0464	4
t_e	0.0379	5
30 mm	0.6330	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.22	5
30 mm	85.44	5
BP	73.14	5
t_e	71.79	5
t_e (d, e)	71.74	5
ΔHv/T_e	18.73	5
d 0 to 110 °C	86.91	5
e	0.1472	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	265.	5
P_c mm	18933.	5
PV/RT 25°C	0.9963	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9433	5
t_c		
ΔHc kcal/m	1043.68	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.01	5
30	19.99	5
40	19.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 50

NAME	2-Ethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3(CH_2)_2C(C_2H_5) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	94.	2
100	35.7	4
30	10.33	4
10	-8.8	5
1	-40.2	5
Pressure mm 25°C	61.99	5
t_e	988.8	5
Density g/ml 20°C	0.708	2
d_4^t 25	0.704	2
30	0.700	4
a	0.724	4
b	-0.038	4
Ref. Index n_D 20°C	1.405	2
25	1.402	2
30	1.399	4
"C"	0.7622	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.051	2
Dielectric		
A 0 to 131 °C	6.76143	4
B	1222.4	4
C	221.	4
A* 0 to 110 °C	1.16444	5
B*	1143.39	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 131 to t_c °C	7.1782	5
Bc	1534.	5
Cc	263.	5
Cryos. consts. A° B°		
t_e °C	103.56	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3468	5
BP	0.0464	4
t_e	0.0379	5
30 mm	0.6337	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.41	5
30 mm	85.58	5
BP	73.27	5
t_e	71.91	5
t_e (d, e)	71.86	5
$\Delta Hv/T_e$	18.74	5
d 0 to 110 °C	87.10	5
e	0.1471	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	266.	5
P_c mm	19065.	5
PV/RT 25°C	0.9963	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9433	5
t_c		
ΔHc kcal/m	1045.08	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.78	5
30	19.85	5
40	18.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 51

NAME	3-Ethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2CH(C_2H_5)CH=CH_2$

Property	Value	Ref.
F.P. °C	-127.4	2
F.P. 100%		
B.P. °C 760 mm	85.13	2
100	27.4	4
30	2.34	4
10	-16.5	5
1	-47.3	5
Pressure mm 25°C	90.06	5
t_e	964.1	5
Density g/ml 20°C	0.6962	2
d^t_4 25	0.6917	2
30	0.6872	4
a	0.7142	4
b	-0.0_388	4
Ref. Index n_D 20°C	1.3980	2
25	1.3954	2
30	1.3928	4
"C"	0.7624	4
MR (Obs.)	34.04	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0499	2
Dielectric		
A -5 to 119 °C	6.70122	4
B	1177.18	4
C	223.	4
A* -5 to 105 °C	1.11300	5
B*	1099.41	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 119 to t_c °C	7.1192	5
Bc	1481.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	93.70	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2520	5
BP	0.0461	4
t_e	0.0384	5
30 mm	0.6244	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.81	5
30 mm	82.03	5
BP	70.24	5
t_e	69.06	5
t_e (d, e)	69.02	5
ΔHv/T_e	18.48	5
d -5 to 105 °C	82.36	5
e	0.1423	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	250.	5
P_c mm	17476.	5
PV/RT 25°C	0.9938	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9445	5
t_c		
ΔHc kcal/m	1047.60	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.42	5
30	18.41	5
40	17.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.l.%/wt. u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 52

NAME	2,3-Dimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2CH(CH_3)C(CH_3)=CH_2$

Property	Value	Ref.
F.P. °C	-134.8	2
F.P. 100%		
B.P. °C 760 mm	84.26	2
100	27.0	4
30	2.07	4
10	-16.7	5
1	-47.4	5
Pressure mm 25°C	91.70	5
t_e	961.5	5
Density g/ml 20°C	0.7051	2
d^t_4 25	0.7008	2
30	0.6965	4
a	0.7223	4
b	-0.0₃84	4
Ref. Index n_D 20°C	1.4033	2
25	1.4007	2
30	1.3981	4
"C"	0.7623	4
MR (Obs.)	34.00	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0508	2
Dielectric		
A (-5 to 120 °C)	6.72442	4
B	1181.0	4
C	223.	4
A* (-5 to 105 °C)	1.13745	5
B*	1103.49	5
K		
c		
t_k, t_x (to °C)		
A', B', C' (to °C)		
A'*, B'* (to °C)		
Ac (120 to t_c °C)	7.1424	5
Bc	1485.	5
Cc	265.	5
Cryos. consts. A°, B°		
t_e °C	92.65	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2466	5
BP	0.0457	4
t_e	0.0381	5
30 mm	0.6209	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.05	5
30 mm	82.33	5
BP	70.53	5
t_e	69.37	5
t_e (d, e)	69.33	5
$\Delta Hv/T_e$	18.62	5
d (-5 to 105 °C)	82.63	5
e	0.1435	5
d', e' (to °C)		
d_c g/ml		
v_c ml/g		
t_c °C	250.	5
P_c mm	18171.	5
PV/RT 25°C	0.9933	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9446	5
t_c		
ΔHc kcal/m	1043.42	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.43	5
30	19.43	5
40	18.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 53

NAME	2, 4-Dimethyl-1-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182	$CH_3CH\ CH_2C = CH_2$ (with CH_3 on CH and CH_3 on C)

Property	Value	Ref.
F.P. °C	-123.8	2
F.P. 100%		
B.P. °C 760 mm	81.64	2
100	24.7	4
30	-0.04	4
10	-18.7	5
1	-49.2	5
Pressure mm 25°C	101.2	5
t_e	954.0	5
Density g/ml 20°C	0.6943	2
d^t_4 25	0.6898	2
30	0.6853	4
a	0.7124	4
b	-0.0388	4
Ref. Index n_D 20°C	1.3986	2
25	1.3959	2
30	1.3952	4
"C"	0.7656	4
MR (Obs.)	34.18	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0514	2
Dielectric		
A (0 to 115 °C)	6.72933	4
B	1176.26	4
C	224.	4
A* (0 to 100 °C)	1.14483	5
B*	1098.95	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (115 to t_c °C)	7.1479	5
Bc	1477.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	89.69	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2261	5
BP	0.0454	4
t_e	0.0381	5
30 mm	0.6173	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.00	5
30 mm	81.55	5
BP	69.95	5
t_e	68.84	5
t_e (d, e)	68.81	5
$\Delta Hv/T_e$	18.62	5
d (0 to 95 °C)	81.54	5
e	0.1420	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	245.	5
P_c mm	17719.	5
PV/RT 25°C	0.9917	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9449	5
t_c		
ΔHc kcal/m	1042.74	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.20	5
30	18.20	5
40	17.21	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.l.%/wt. u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 54

NAME	3, 3-Dimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} — Molecular Weight 98.182	$CH_3CH_2C(CH_3)_2CH=CH_2$

Property	Value	Ref.
F.P. °C	-134.3	2
F.P. 100%		
B.P. °C 760 mm	77.54	2
100	20.96	4
30	-3.59	4
10	-22.1	5
1	-52.2	5
Pressure mm 25°C	119.2	5
t_e	942.9	5
Density g/ml 20°C	0.6974	2
d^t_4 25	0.6932	2
30	0.6890	4
a	0.7143	4
b	-0.0_382	4
Ref. Index n_D 20°C	1.3984	2
25	1.3958	2
30	1.3932	4
"C"	0.7619	4
MR (Obs.)	34.01	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0497	2
Dielectric		
A -10 to 111 °C	6.69410	4
B	1149.86	4
C	224.	4
A* -10 to 100 °C	1.11439	5
B*	1073.58	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 111 to t_c °C	7.1122	5
Bc	1447.	5
Cc	265.	5
Cryos. consts. A°		
B°		
t_e °C	85.13	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1965	5
BP	0.0452	4
t_e	0.0383	5
30 mm	0.6116	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.14	5
30 mm	80.18	5
BP	68.68	5
t_e	67.63	5
t_e (d, e)	67.60	5
ΔHv/T_e	18.53	5
d -10 to 100 °C	79.67	5
e	0.1418	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	240.	5
P_c mm	17499.	5
PV/RT 25°C	0.9909	5
30 mm	1.0000	5
BP	0.9525	5
t_e	0.9458	5
t_c		
ΔHc kcal/m	1044.77	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.54	5
30	18.58	5
40	17.64	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 55

NAME	3, 4-Dimethyl-1-pentene
Mole % Pur.	
Ref.	
Molecular Formula	C_7H_{14}
Molecular Weight	98.182
STRUCTURAL FORMULA	$CH_3CH(CH_3)CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	81.	2
100	24.1	4
30	-0.69	4
10	-19.3	5
1	-49.8	5
Pressure mm 25°C	104.2	5
t_e	952.2	5
Density g/ml 20°C	0.701	2
d^t_4 25	0.697	2
30	0.693	4
a	0.717	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.3995	2
25	1.3969	2
30	1.3946	4
"C"	0.7599	4
MR (Obs.)	33.9	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0490	2
Dielectric		
A -1 to	6.71798	4
B 116 °C	1170.33	4
C	224.	4
A* -1 to	1.13434	5
B* 99 °C	1093.21	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 116 to	7.1370	5
Bc t_c °C	1472.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	88.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2208	5
BP	0.0454	4
t_e	0.0382	5
30 mm	0.6168	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.34	5
30 mm	81.22	5
BP	69.65	5
t_e	68.55	5
t_e (d, e)	68.51	5
$\Delta Hv/T_e$	18.58	5
d -1 to	81.13	5
e 89 °C	0.1417	5
d' to e' °C		
d_c g/ml	0.210	5
v_c ml/g	4.769	5
t_c °C	246.	5
P_c mm	17980.	5
PV/RT 25°C	0.9907	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9449	5
t_c		
ΔHc kcal/m	1045.32	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.95	5
30	19.03	5
40	18.12	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 56

NAME	4,4-Dimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3C(CH_3)_2CH_2CH=CH_2$

Property	Value	Ref.
F.P. °C	-136.600	2
F.P. 100%		
B.P. °C 760 mm	72.49	2
100	16.43	4
30	-7.87	4
10	-26.13	5
1	-55.93	5
Pressure mm 25°C	144.6	5
t_e	928.4	5
Density g/ml 20°C	0.6827	2
d^t_4 25	0.6785	2
30	0.6743	4
a	0.6995	4
b	-0.0$_3$81	4
Ref. Index n_D 20°C	1.3918	2
25	1.3892	2
30	1.3867	4
"C"	0.7661	4
MR (Obs.)	34.23	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0504	2
Dielectric		
A (-15 to 105 °C)	6.67374	4
B	1128.36	4
C	225.	4
A* (-15 to 90 °C)	1.09996	5
B*	1052.99	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (105 to t_c °C)	7.0920	5
Bc	1421.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	79.47	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1663	5
BP	0.0448	4
t_e	0.0384	5
30 mm	0.6049	5
ΔHm cal/g		
ΔHv cal/g 25°C	73.95	5
30 mm	78.52	5
BP	67.25	5
t_e	66.30	5
t_e (d,e)	66.27	5
ΔHv/T_e	18.46	5
d (-15 to 90 °C)	77.42	5
e	0.1403	5
d' e' to °C		
d_c g/ml	0.201	5
v_c ml/g	4.985	5
t_c °C	230.	5
P_c mm	16735.	5
PV/RT 25°C	0.9880	5
30 mm	1.0000	5
BP	0.9525	5
t_e	0.9462	5
t_c	0.261	5
ΔHc kcal/m	1043.65	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. 20°C	17.93	5
γ 30	17.03	5
40	16.15	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 57

NAME	3-Ethyl-2-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3CH_2C(C_2H_5) = CH\text{=}CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	96.01	2
100	37.51	4
30	11.98	4
10	-7.27	5
1	-38.83	5
Pressure mm 25°C	57.19	5
t_e	993.9	5
Density g/ml 20°C	0.7204	2
d_4^t 25	0.7159	2
30	0.7114	4
a	0.7384	4
b	-0.0_389	4
Ref. Index n_D 20°C	1.4148	2
25	1.4122	2
30	1.4094	4
"C"	0.7662	4
MR (Obs.)	34.11	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0546	2
Dielectric		
A 5 to 134 °C	6.77291	4
B	1233.83	4
C	221.	4
A* 5 to 116 °C	1.17411	5
B*	1154.43	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 134 to t_c °C	7.1903	5
Bc	1548.	5
Cc	264.	5
Cryos. consts. A°		
B°		
t_e °C	105.79	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.3725	5
BP	0.0465	4
t_e	0.0378	5
30 mm	0.6369	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.20	5
30 mm	86.15	5
BP	73.79	5
t_e	72.40	5
t_e (d, e)	72.35	5
ΔHv/T_e	18.76	5
d 12 to 106 °C	87.92	5
e	0.1472	5
d' to °C		
e'		
d_c g/ml	0.217	5
v_c ml/g	4.598	5
t_c °C	270.	5
P_c mm	19361.	5
PV/RT 25°C	0.9967	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9426	5
t_c	0.258	5
ΔHc kcal/m	1044.30	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.28	5
30	21.17	5
40	20.09	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 58

NAME	•2,3-Dimethyl-2-pentene
Mole % Pur.	
Ref.	
Molecular Formula	C_7H_{14}
Molecular Weight	98.182

STRUCTURAL FORMULA

$CH_3CH_2C = C\ CH_3$ with CH_3 on each of the two double-bonded carbons (CH_3CH_3 printed below)

		Ref.
F.P. °C	-118.3	2
F.P. 100%		
B.P. °C 760 mm	97.46	2
100	38.46	4
30	12.75	4
10	-6.63	5
1	-38.37	5
Pressure mm 25°C	54.94	5
t_e	998.2	5
Density g/ml 20°C	0.7277	2
d^t_4 25	0.7234	2
30	0.7190	4
a	0.7450	4
b	-0.0₃85	4
Ref. Index n_D 20°C	1.4208	2
25	1.4182	2
30	1.4156	4
"C"	0.7688	4
MR (Obs.)	34.20	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0570	2
Dielectric		
A (5 to 137 °C)	6.75429	4
B	1233.55	4
C	221.	4
A* (5 to 115 °C)	1.15351	5
B*	1153.70	5
K		
c		
t_k to t_x °C		
A' to B' °C		
C'		
A'* to B'* °C		
Ac (137 to t_c °C)	7.1726	5
Bc	1551.	5
Cc	264.	5
Cryos. consts. A°		
B°		
t_e °C	107.50	5

		Ref.
dt/dP °C/mm 25°C	0.3878	5
BP	0.0470	4
t_e	0.0381	5
30 mm	0.6412	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.24	5
30 mm	86.03	5
BP	73.68	5
t_e	72.27	5
t_e (d,e)	72.22	5
ΔHv/T_e	18.64	5
d (5 to 115 °C)	87.89	5
e	0.1458	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	273.	5
P_c mm	19410.	5
PV/RT 25°C	0.9970	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9424	5
t_c		
ΔHc kcal/m	1041.82	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.20	5
30	22.10	5
40	21.03	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	130.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c ⁺grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 59

NAME	2,4-Dimethyl-2-pentene
Mole % Pur.	Ref.
Molecular Formula	C_7H_{14}
Molecular Weight	98.182

STRUCTURAL FORMULA

$CH_3C = CHCH\ CH_3$ with CH_3 branches on the second and fourth carbons

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	83.44	2
100	26.25	4
30	1.39	4
10	-17.33	5
1	-47.94	5
Pressure mm 25°C	94.68	5
t_e	959.2	5
Density g/ml 20°C	0.6955	2
d_4^t 25	0.6912	2
30	0.6869	4
a	0.7126	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4040	2
25	1.4013	2
30	1.3986	4
"C"	0.7741	4
MR (Obs.)	34.52	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0562	2
Dielectric		
A -10 to 118 °C	6.71947	4
B	1176.32	4
C	223.	4
A* -10 to 105 °C	1.13362	5
B*	1099.06	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 118 to t_c °C	7.1369	5
Bc	1478.	5
Cc	264.	5
Cryos. consts. A°		
B°		
t_e °C	91.73	5

		Ref.
dt/dP °C/mm 25°C	0.2398	5
BP	0.0456	4
t_e	0.0381	5
30 mm	0.6196	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.72	5
30 mm	82.09	5
BP	70.30	5
t_e	69.15	5
t_e (d, e)	69.11	5
$\Delta Hv/T_e$	18.60	5
d -10 to 105 °C	82.29	5
e	0.1437	5
d' to °C		
e'		
d_c g/ml	0.208	5
v_c ml/g	4.81	5
t_c °C	248.	5
P_c mm	17809.	5
PV/RT 25°C	0.9930	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9447	5
t_c	0.259	5
ΔHc kcal/m	1041.34	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.34	5
30	18.38	5
40	17.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	128.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 60

NAME	3,4-Dimethyl-cis-2-pentene	STRUCTURAL FORMULA
		$CH_3CH\ C = CH\ CH_3$ / $CH_3\ CH_3$

Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	87.	2
100	29.43	4
30	4.36	4
10	-14.5	5
1	-45.4	5
Pressure mm 25°C	82.28	5
t_e	969.4	5
Density g/ml 20°C	0.713	2
d_4^t 25	0.709	2
30	0.705	4
a	0.7290	4
b	-0.0378	4
Ref. Index n_D 20°C	1.407	2
25	1.404	2
30	1.401	4
"C"	0.7604	4
MR (Obs.)	33.9	2
MR (Calc.)	34.059	5
(nD-d/2)	1.050	2
Dielectric		
A -5 to	6.74284	4
B 124 °C	1197.23	4
C	223.	4
A* -5 to	1.15215	5
B* 105 °C	1118.91	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 124 to	7.1618	5
Bc t_c °C	1506.	5
Cc	265.	5
Cryos. A°		
consts. B°		
t_e °C	95.72	5

		Ref.
dt/dP °C/mm 25°C	0.2711	5
BP	0.0459	4
t_e	0.0380	5
30 mm	0.6251	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.23	5
30 mm	83.15	5
BP	71.33	5
t_e	70.12	5
t_e (d, e)	70.09	5
$\Delta Hv/T_e$	18.66	5
d -5 to	83.78	5
e 105 °C	0.1430	5
d' to		
e' °C		
d_c g/ml	0.216	5
v_c ml/g	4.63	5
t_c °C	256.	5
P_c mm	18790.	5
PV/RT 25°C	0.9944	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9444	5
t_c	0.259	5
ΔHc kcal/m	1042.02	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	21.37	5
γ 30	20.40	5
40	19.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 61

NAME	3, 4-Dimethyl-trans-2-pentene	STRUCTURAL FORMULA
		$CH_3CH\ C = CHCH_3$ CH_3CH_3

Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	87.	2
100	29.43	4
30	4.36	5
10	-14.53	4
1	-45.44	4
Pressure mm 25°C	82.28	4
t_e	969.36	4
Density g/ml 20°C	0.713	2
d^t_4 25	0.709	2
30	0.7050	4
a	0.7290	4
b	-0.0378	4
Ref. Index n_D 20°C	1.407	2
25	1.404	2
30	1.402	4
"C"	0.7604	5
MR (Obs.)	33.9	2
MR (Calc.)	34.059	5
(nD-d/2)	1.050	2
Dielectric		
A -5 to 124 °C	6.74284	4
B	1197.23	4
C	223.	4
A* -5 to 105 °C	1.15215	5
B*	1118.91	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 124 to t_c °C	7.1618	5
Bc	1505.5	5
Cc	265.11	5
Cryos. consts. A°		
B°		
t_e °C	95.72	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2711	5
BP	0.0459	4
t_e	0.03801	5
30 mm	0.6251	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.23	5
30 mm	83.15	5
BP	71.33	5
t_e	70.12	5
t_e (d, e)	70.09	5
$ΔHv/T_e$	18.66	5
d -5 to 96 °C	83.78	5
e	0.1430	5
d' to °C		
e'		
d_c g/ml	0.216	5
v_c ml/g	4.633	5
t_c °C	256.	5
P_c mm	18790.	5
PV/RT 25°C	0.9939	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9444	5
t_c	0.259	5
ΔHc kcal/m	1042.02	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. γ 20°C	21.37	5
30	20.40	5
40	19.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 62

NAME	4,4-Dimethyl-cis-2-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Structural formula: $CH_3C(CH_3)_2\ CH{=}CHCH_3$ (CH3 above and below the C)

Property	Value	Ref.
F.P. °C	-135.46	2
F.P. 100%		
B.P. °C 760 mm	80.42	2
100	23.53	4
30	-1.19	4
10	-19.80	5
1	-50.21	5
Pressure mm 25°C	106.6	5
t_e	950.6	5
Density g/ml 20°C	0.6996	2
d^t_4 25	0.6952	2
30	0.6908	4
a	0.7172	4
b	-0.0386	4
Ref. Index n_D 20°C	1.4024	2
25	1.3998	2
30	1.3970	4
"C"	0.7667	4
MR (Obs.)	34.20	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0526	2
Dielectric		
A (-10 to 115 °C)	6.71324	4
B	1166.67	4
C	224.	4
A* (-10 to 95 °C)	1.13040	5
B*	1089.71	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (115 to t_c °C)	7.1319	5
Bc	1467.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	88.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2165	5
BP	0.0454	4
t_e	0.0382	5
30 mm	0.6160	5
ΔHm cal/g		
ΔHv cal/g 25°C	77.16	5
30 mm	81.03	5
BP	69.46	5
t_e	68.37	5
t_e (d, e)	68.34	5
ΔHv/T_e	18.57	5
d (-10 to 88 °C)	80.87	5
e	0.1418	5
d' to e' °C		
d_c g/ml	0.208	5
v_c ml/g	4.819	5
t_c °C	244.	5
P_c mm	17725.	5
PV/RT 25°C	0.9915	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9450	5
t_c	0.260	5
ΔHc kcal/m	1042.05	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.79	5
30	18.79	5
40	17.80	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 63

NAME	4,4-Dimethyl-trans-2-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182

Structural formula: $CH_3C(CH_3)_2CH{=}CHCH_3$ (printed as: CH_3 above, $CH_3C\ \ CH{=}CHCH_3$, CH_3 below)

Property	Value	Ref.
F.P. °C	-115.235	2
F.P. 100%		
B.P. °C 760 mm	76.75	2
100	20.24	4
30	-4.27	4
10	-22.7	5
1	-52.8	5
Pressure mm 25°C	122.9	5
t_e	940.6	5
Density g/ml 20°C	0.6889	2
d^t_4 25	0.6845	2
30	0.6801	4
a	0.7066	4
b	$-0.0_{3}86$	4
Ref. Index n_D 20°C	1.3982	2
25	1.3953	2
30	1.3928	4
"C"	0.7709	4
MR (Obs.)	34.41	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0538	2
Dielectric		
A -10 to 110 °C	6.68799	4
B	1145.0	4
C	224.	4
A* -10 to 95 °C	1.10939	5
B*	1069.0	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 110 to t_c °C	7.1055	5
Bc	1440.	5
Cc	265.	5
Cryos. A°		
consts. B°		
t_e °C	84.25	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1913	5
BP	0.0451	4
t_e	0.0383	5
30 mm	0.6105	5
ΔHm cal/g		
ΔHv cal/g 25°C	75.80	5
30 mm	79.93	5
BP	68.43	5
t_e	67.40	5
t_e (d, e)	67.37	5
ΔHv/T_e	18.51	5
d -10 to 95 °C	79.33	5
e	0.1420	5
d' to °C		
e'		
d_c g/ml	0.203	5
v_c ml/g	4.928	5
t_c °C	237.	5
P_c mm	17097.	5
PV/RT 25°C	0.9908	5
30 mm	1.0000	5
BP	0.9525	5
t_e	0.9458	5
t_c	0.260	5
ΔHc kcal/m	1041.05	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	18.60	5
30	17.64	5
40	16.69	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 64

NAME	2-Ethyl-3-methyl-1-butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} — Molecular Weight 98.182	$CH_3CH(CH_3)C(C_2H_5)=CH_2$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	89.	2
100	31.23	4
30	6.07	4
10	-12.9	5
1	-43.9	5
Pressure mm 25°C	75.95	5
t_e	975.1	5
Density g/ml 20°C	0.715	2
d^t_4 25	0.711	2
30	0.707	4
a	0.7310	4
b	-0.038	4
Ref. Index n_D 20°C	1.410	2
25	1.407	2
30	1.405	4
"C"	0.7635	4
MR (Obs.)	34.0	2
MR (Calc.)	34.059	5
(nD-d/2)	1.052	2
Dielectric		
A (-5 to 125 °C)	6.74138	4
B	1200.64	4
C	222.	4
A* (-5 to 110 °C)	1.14911	5
B*	1122.32	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (125 to t_c °C)	7.1591	5
Bc	1509.	5
Cc	264.	5
Cryos. A° consts. B°		
t_e °C	97.97	5

		Ref.
dt/dP °C/mm 25°C	0.2906	5
BP	0.0460	4
t_e	0.0380	5
30 mm	0.6272	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.09	5
30 mm	83.90	5
BP	71.87	5
t_e	70.61	5
t_e (d, e)	70.57	5
$\Delta Hv/T_e$	18.68	5
d (-5 to 110 °C)	84.78	5
e	0.1450	5
d' to		
e' °C		
d_c g/ml	0.216	5
v_c ml/g	4.624	5
t_c °C	259.	5
P_c mm	18932.	5
PV/RT 25°C	0.9949	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9442	5
t_c	0.259	5
ΔHc kcal/m	1043.42	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.61	5
30	20.64	5
40	19.68	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_C$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 65

NAME	2, 3, 3-Trimethyl-1-butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_7H_{14} / Molecular Weight 98.182	$CH_3C(CH_3)_2-C(CH_3)=CH_2$

Property	Value	Ref.
F.P. °C	-109.85	2
F.P. 100%		
B.P. °C 760 mm	77.87	2
100	21.26	4
30	-3.31	4
10	-21.79	5
1	-51.98	5
Pressure mm 25°C	117.6	5
t_e	943.3	5
Density g/ml 20°C	0.7050	2
d^t_4 25	0.7005	2
30	0.6960	4
a	0.7230	4
b	-0.0_388	4
Ref. Index n_D 20°C	1.4029	2
25	1.4000	2
30	1.3973	4
"C"	0.7617	4
MR (Obs.)	33.98	2
MR (Calc.)	34.059	5
(nD-d/2)	1.0504	2
Dielectric		
A (-10 to 115 °C)	6.69701	4
B	1152.0	4
C	224.	4
A* (-10 to 95 °C)	1.11770	5
B*	1075.8	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (115 to t_c °C)	7.1153	5
Bc	1450.	5
Cc	265.	5
Cryos. consts. A° B°		
t_e °C	85.48	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1987	5
BP	0.0452	4
t_e	0.0383	5
30 mm	0.6121	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.23	5
30 mm	80.29	5
BP	68.75	5
t_e	67.70	5
t_e (d, e)	67.67	5
$\Delta Hv/T_e$	18.53	5
d (-10 to 95 °C)	79.82	5
e	0.1422	5
d' e' to °C		
d_c g/ml	0.209	5
v_c ml/g	4.789	5
t_c °C	241.	5
P_c mm	17662.	5
PV/RT 25°C	0.9903	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9452	5
t_c	0.259	5
ΔHc kcal/m	1042.08	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.40	5
30	19.35	5
40	18.32	5
Parachor [P] 20°C		
30		
40		
Sugd.	296.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 66

NAME	1-Octene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_5CH=CH_2$

Property	Value	Ref.
F.P. °C	-101.736	2
F.P. 100%		
B.P. °C 760 mm	121.280	2
100	61.630	2
30	35.33	4
10	15.38	2
1	-17.5	5
Pressure mm 25°C	17.38	5
t_e	1064.	5
Density g/ml 20°C	0.71492	2
d_4^t 25	0.71085	2
30	0.70677	4
a	0.73118	4
b	-0.0_3809	4
Ref. Index n_D 20°C	1.40870	2
25	1.40620	2
30	1.40376	4
"C"	0.7613	4
MR (Obs.)	38.778	2
MR (Calc.)	38.677	5
(nD-d/2)	1.05124	2
Dielectric		
A 0 to 151 °C	6.93263	2
B	1353.5	2
C	212.764	2
A* 25 to 140 °C	1.37023	5
B*	1272.1	5
K		
c		
t_k to		
t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 151 to t_c °C	7.3370	5
Bc	1664.	5
Cc	252.	5
Cryos. consts. A°		
B°		
t_e °C	133.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0436	5
BP	0.04711	4
t_e	0.03622	5
30 mm	0.6583	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.82	5
30 mm	85.36	5
BP	72.70	5
t_e	70.95	5
t_e (d, e)	70.86	5
$\Delta Hv/T_e$	19.56	5
d 25 to 134 °C	90.56	5
e	0.1473	5
d' to °C		
e'		
d_c g/ml	0.240	5
v_c ml/g	4.173	5
t_c °C	292.	5
P_c mm	19197.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9396	5
t_c	0.255	5
ΔHc kcal/m	1194.97	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	0.382	2
60	0.316	2
80	0.270	2
100	0.234	2
B^v 20 to 60 °C	429.70	5
A^v	$\bar{2}.20988$	5
(B^v) 60 to 110 °C	409.49	5
(A^v)	$\bar{2}.27184$	5
c_p liq. °K		
c_p vap. 300°K	0.38117	2
400	0.48045	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0250	4
n	0.0013	4
o	-0.0_649	4
m' 700 to 1000 °K	0.1070	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	20.79	5
30	19.86	5
40	18.94	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	116.8	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 67

NAME	cis-2-Octene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3(CH_2)_4CH=CHCH_3$

Property	Value	Ref.
F.P. °C	-100.2	2
F.P. 100%		
B.P. °C 760 mm	125.64	2
100	64.12	4
30	37.93	4
10	16.52	5
1	-17.84	5
Pressure mm 25°C	16.067	5
t_e	1076.47	5
Density g/ml 20°C	0.7243	2
d^t_4 25	0.7201	2
30	0.7159	4
a	0.7411	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4150	2
25	1.4125	2
30	1.4099	4
"C"	0.7624	4
MR (Obs.)	38.794	4
MR (Calc.)	38.677	5
(nD-d/2)	1.0529	2
Dielectric		
A 38 to 157 °C	6.87711	5
B	1361.3	5
C	215.	4
A* 38 to 150 °C	1.30761	5
B*	1277.39	5
K		
c		
t_k to t_x °C		
A' 20 to 38 °C	7.26268	5
B'	1562.64	5
C'	233.	5
A'* 20 to 38 °C	1.65772	5
B'*	1463.16	5
Ac 157 to t_c °C	7.28738	5
Bc	1683.60	5
Cc	256.69	5
Cryos. consts. A°		
B°		
t_e °C	139.03	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.1514	5
BP	0.04870	5
t_e	0.03714	5
30 mm	0.6758	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.12	5
30 mm	84.10	5
BP	71.86	5
t_e	70.08	5
t_e (d, e)	70.01	5
$\Delta Hv/T_e$	19.08	5
d 38 to 140 °C	89.23	5
e	0.1382	5
d' 20 to 38 °C	87.21	5
e'	0.0838	5
d_c g/ml	0.25	5
v_c ml/g	4.006	5
t_c °C	300.	5
P_c mm	18399.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9386	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.91	1
30	20.90	1
40	19.93	1
Parachor [P] 20°C	335.21	4
30	335.23	4
40	335.21	4
Sugd.	335.2	5
Exp. L.l.%/wt. u.		
Dispersion	118.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 68

NAME	trans-2-Octene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_4CH=CHCH_3$

		Ref.
F.P. °C	-87.7	2
F.P. 100%		
B.P. °C 760 mm	125.0	2
100	63.55	4
30	36.56	4
10	16.02	5
1	-18.28	5
Pressure mm 25°C	16.52	5
t_e	1075.	5
Density g/ml 20°C	0.7199	2
d_4^t 25	0.7157	2
30	0.7115	4
a	0.7367	4
b	-0.0384	4
Ref. Index n_D 20°C	1.4132	2
25	1.4107	2
30	1.4081	4
"C"	0.7639	4
MR (Obs.)	38.88	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0533	2
Dielectric		
A (37 to 156 °C)	6.87364	4
B	1357.6	4
C	215.	4
A* (37 to 148 °C)	1.30491	5
B*	1273.8	5
K		
c		
t_k to t_x °C		
A' (25 to 37 °C)	7.25977	5
B'	1558.8	5
C'	233.	5
A'* 25 to	1.66269	5
B'* 37 °C	1461.4	5
Ac (156 to t_c °C)	7.2835	5
Bc	1678.	5
Cc	256.	5
Cryos. consts. A° B°		
t_e °C	138.31	5

		Ref.
dt/dP °C/mm 25°C	1.1227	5
BP	0.0487	4
t_e	0.0372	5
30 mm	0.6748	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.90	5
30 mm	83.94	5
BP	71.69	5
t_e	69.92	5
t_e (d, e)	69.84	5
$\Delta Hv/T_e$	19.06	5
d (37 to 138 °C)	89.00	5
e	0.1385	5
d' (25 to 37 °C)	87.00	5
e'	0.0836	5
d_c g/ml	0.225	5
v_c ml/g	4.44	5
t_c °C	299.	5
P_c mm	18206.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9386	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.38	5
30	20.39	5
40	19.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 69

NAME	cis-3-Octene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_3CH{=}CHCH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.9	2
100	61.66	4
30	34.76	4
10	14.28	5
1	-19.91	5
Pressure mm 25°C	18.16	5
t_e	1069.	5
Density g/ml 20°C	0.721	2
d_4^t 25	0.717	2
30	0.713	4
a	0.7370	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4135	2
25	1.4111	2
30	1.4087	4
"C"	0.7633	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A 35 to	6.87423	4
B 155 °C	1353.4	4
C	216.	4
A* 35 to	1.30707	5
B* 146 °C	1269.7	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.26164	5
B' 35 °C	1554.6	5
C'	234.	5
A'* 25 to	1.65709	5
B'* 35 °C	1454.9	5
Ac 155 to	7.2856	5
Bc t_c °C	1675.	5
Cc	258.	5
Cryos. A° consts. B°		
t_e °C	135.95	5

		Ref.
dt/dP °C/mm 25°C	1.0317	5
BP	0.0485	4
t_e	0.0372	5
30 mm	0.6726	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.02	5
30 mm	83.24	5
BP	71.17	5
t_e	69.46	5
t_e (d, e)	69.39	5
ΔHv/T_e	19.05	5
d 35 to	87.99	5
e 136 °C	0.1369	5
d' 25 to	86.04	5
e' 35 °C	0.0807	5
d_c g/ml	0.228	5
v_c ml/g	4.393	5
t_c °C	297.	5
P_c mm	18324.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9388	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B_v to		
A_v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	21.51	5
γ 30	20.56	5
40	19.64	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 70

NAME	trans-3-Octene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_3CH{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C	-110.	2
F.P. 100%		
B.P. °C 760 mm	123.3	2
100	62.01	4
30	35.09	4
10	14.59	5
1	-19.63	5
Pressure mm 25°C	17.85	5
t_e	1070.	5
Density g/ml 20°C	0.7152	2
d_4^t 25	0.7110	2
30	0.7068	4
a	0.7320	4
b	-0.0384	4
Ref. Index n_D 20°C	1.4126	2
25	1.4102	2
30	1.4075	4
"C"	0.7679	4
MR (Obs.)	39.09	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0550	2
Dielectric		
A (35 to 153 °C)	6.87632	4
B	1355.7	4
C	216.	4
A* (35 to 146 °C)	1.30868	5
B*	1271.9	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	7.26338	5
B'	1557.0	5
C'	234.	5
A'* 25 to	1.65858	5
B'* 35 °C	1457.2	5
Ac (153 to t_c °C)	7.2873	5
Bc	1676.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	136.40	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0480	5
BP	0.0485	4
t_e	0.0372	5
30 mm	0.6732	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.17	5
30 mm	83.34	5
BP	71.27	5
t_e	69.54	5
t_e (d, e)	69.47	5
$\Delta Hv/T_e$	19.05	5
d (35 to 140 °C)	88.14	5
e	0.1369	5
d' (25 to 35 °C)	86.17	5
e'	0.0807	5
d_c g/ml	0.225	5
v_c ml/g	4.44	5
t_c °C	295.	5
P_c mm	17998.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9388	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.83	5
30	19.86	5
40	18.92	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 71

NAME	cis-4-Octene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3(CH_2)_2CH{=}CH(CH_2)_2CH_3$

		Ref.
F.P. °C	-118.7	2
F.P. 100%		
B.P. °C 760 mm	122.54	2
100	61.33	4
30	34.45	4
10	13.98	5
1	-20.18	5
Pressure mm 25°C	18.46	5
t_e	1068.	5
Density g/ml 20°C	0.7212	2
d_4^t 25	0.7170	2
30	0.7128	4
a	0.7380	4
b	-0.0_383	4
Ref. Index n_D 20°C	1.4148	2
25	1.4124	2
30	1.4097	4
"C"	0.7653	4
MR (Obs.)	38.95	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0542	2
Dielectric		
A 35 to	6.87149	4
B 153 °C	1351.0	4
C	216.	4
A* 35 to	1.30477	5
B* 146 °C	1267.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.25919	5
B' 35 °C	1552.2	5
C'	234.	5
A'* 25 to	1.65489	5
B'* 35 °C	1452.5	5
Ac 153 to	7.2826	5
Bc t_c °C	1672.	5
Cc	257.	5
Cryos. A° consts. B°		
t_e °C	135.54	5

		Ref.
dt/dP °C/mm		
25°C	1.0168	5
BP	0.0485	4
t_e	0.0372	5
30 mm	0.6721	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.89	5
30 mm	83.13	5
BP	71.07	5
t_e	69.36	5
t_e (d, e)	69.29	5
ΔHv/T_e	19.04	5
d 35 to	87.85	5
e 136 °C	0.1369	5
d' 25 to	85.91	5
e' 35 °C	0.0806	5
d_c g/ml	0.226	5
v_c ml/g	4.42	5
t_c °C	295.	5
P_c mm	18155.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9388	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.53	5
30	20.54	5
40	19.58	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 72

NAME	trans-4-Octene	STRUCTURAL FORMULA
		$CH_3(CH_2)_2CH{=}CH(CH_2)_2CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-93.810	2
F.P. 100%		
B.P. °C		
760 mm	122.25	2
100	61.06	4
30	34.19	4
10	13.74	5
1	-20.40	5
Pressure mm 25°C	18.71	5
t_e	1067.	5
Density g/ml 20°C	0.7141	2
d^t_4 25	0.7099	2
30	0.7057	4
a	0.7309	4
b	-0.0383	4
Ref. Index n_D 20°C	1.4118	2
25	1.4093	2
30	1.4068	4
"C"	0.7676	4
MR (Obs.)	39.08	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0548	2
Dielectric		
A (34 to 152 °C)	6.86904	4
B	1349.0	4
C	216.	4
A* (34 to 145 °C)	1.30268	5
B*	1265.5	5
K		
c		
t_k / t_x (to °C)		
A' (20 to 34 °C)	7.25696	5
B'	1550.1	5
C'	234.	5
A'* 20 to	1.65288	5
B'* 34 °C	1450.5	5
Ac (152 to t_c °C)	7.2798	5
Bc	1668.	5
Cc	257.	5
Cryos. A° consts. B°		
t_e °C	135.22	5

		Ref.
dt/dP °C/mm		
25°C	1.0047	5
BP	0.0485	4
t_e	0.0372	5
30 mm	0.6717	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.78	5
30 mm	83.04	5
BP	70.98	5
t_e	69.27	5
t_e (d, e)	69.20	5
$\Delta Hv/T_e$	19.03	5
d (34 to 140 °C)	87.72	5
e	0.1370	5
d' (20 to 34 °C)	85.79	5
e'	0.0805	5
d_c g/ml	0.223	5
v_c ml/g	4.48	5
t_c °C	294.	5
P_c mm	17879.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9389	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.70	5
30	19.73	5
40	18.80	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 73

NAME	2-Methyl-1-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_4C = CH_2$ with CH_3

Property	Value	Ref.
F.P. °C	-90.0	2
F.P. 100%		
B.P. °C 760 mm	119.3	2
100	58.44	4
30	31.74	4
10	11.43	5
1	-22.45	5
Pressure mm 25°C	21.24	5
t_e	1058.	5
Density g/ml 20°C	0.7205	2
d^t_4 25	0.7164	2
30	0.7123	4
a	0.7369	4
b	-0.0381	4
Ref. Index n_D 20°C	1.4123	2
25	1.4098	2
30	1.4073	4
"C"	0.7617	4
MR (Obs.)	38.78	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0521	2
Dielectric		
A (31 to 150 °C)	6.85239	4
B	1331.7	4
C	216.	4
A* (31 to 135 °C)	1.28966	5
B*	1249.0	5
K		
c		
t_k to t_x °C		
A' (20 to 31 °C)	7.24294	5
B'	1532.2	5
C'	234.	5
A'* 20 to	1.64083	5
B'* 31 °C	1433.1	5
Ac (150 to t_c °C)	7.2629	5
Bc	1649.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	131.90	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8953	5
BP	0.0482	4
t_e	0.0373	5
30 mm	0.6672	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.81	5
30 mm	82.27	5
BP	70.25	5
t_e	68.59	5
t_e (d, e)	68.52	5
$\Delta Hv/T_e$	19.00	5
d (31 to 135 °C)	86.63	5
e	0.1373	5
d' (20 to 31 °C)	84.80	5
e'	0.0796	5
d_c g/ml	0.226	5
v_c ml/g	4.43	5
t_c °C	291.	5
P_c mm	17989.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.45	5
30	20.48	5
40	19.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l.%/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 74

NAME	3-Methyl-1-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_3CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	111.	2
100	50.98	4
30	24.69	4
10	4.82	5
1	-27.81	5
Pressure mm 25°C	30.47	5
t_e	1035.	5
Density g/ml 20°C	0.711	2
d^t_4 25	0.707	2
30	0.703	4
a	0.727	4
b	-0.038	4
Ref. Index n_D 20°C	1.406	2
25	1.404	2
30	1.402	4
"C"	0.7607	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A (20 to 140 °C)	6.82779	4
B	1298.6	4
C	218.	4
A* (20 to 125 °C)	1.27254	5
B*	1216.9	5
K		
c		
t_k, t_x (to °C)		
A', B', C' (to °C)		
A'*, B'* (to °C)		
Ac (140 to t_c °C)	7.2396	5
Bc	1610.	5
Cc	259.	5
Cryos. consts. A°, B°		
t_e °C	122.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6480	5
BP	0.0476	4
t_e	0.0375	5
30 mm	0.6566	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.74	5
30 mm	79.78	5
BP	68.20	5
t_e	66.70	5
t_e (d, e)	66.64	5
ΔHv/T_e	18.91	5
d (20 to 130 °C)	83.09	5
e	0.1342	5
d', e' (to °C)		
d_c g/ml	0.220	5
v_c ml/g	4.54	5
t_c °C	278.	5
P_c mm	17269.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.34	5
30	19.41	5
40	18.50	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 75

NAME	4-Methyl-1-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2CH(CH_3)CH_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.8	2
100	52.59	4
30	26.20	4
10	6.13	5
1	-27.34	5
Pressure mm 25°C	28.23	5
t_e	1041.	5
Density g/ml 20°C	0.717	2
d_4^t 25	0.713	2
30	0.709	4
a	0.7330	4
b	-0.0_379	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.406	4
"C"	0.7614	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A (20 to 143 °C)	6.88388	4
B	1309.3	4
C	218.	4
A* (20 to 130 °C)	1.28143	5
B*	1227.2	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (143 to t_c °C)	7.2514	5
Bc	1624.	5
Cc	259.	5
Cryos. consts. A° B°		
t_e °C	124.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6943	5
BP	0.0478	4
t_e	0.0374	5
30 mm	0.6593	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.33	5
30 mm	80.26	5
BP	68.66	5
t_e	67.14	5
t_e (d, e)	67.08	5
$\Delta Hv/T_e$	18.94	5
d (20 to 130 °C)	83.77	5
e	0.1339	5
d' e' to °C		
d_c g/ml	0.224	5
v_c ml/g	4.47	5
t_c °C	281.	5
P_c mm	17639.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.03	5
30	20.10	5
40	19.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 76

NAME	5-Methyl-1-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)(CH_2)_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.3	2
100	53.09	4
30	26.70	4
10	6.63	5
1	-26.83	5
Pressure mm 25°C	27.51	5
t_e	1042.0	5
Density g/ml 20°C	0.7164	2
d^t_4 25	0.7122	2
30	0.7080	4
a	0.7332	4
b	-0.0_383	4
Ref. Index n_D 20°C	1.4094	2
25	1.4069	2
30	1.4044	4
"C"	0.7610	4
MR (Obs.)	38.76	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0512	2
Dielectric		
A (20 to 143 °C)	6.83861	4
B	1309.1	4
C	217.47	4
A* (20 to 130 °C)	1.28101	5
B*	1227.2	5
K		
c		
t_k to / t_x °C		
A' to / B' °C / C'		
A'* to / B'* °C		
Ac (143 to t_c °C)	7.2501	5
Bc	1622.	5
Cc	258.	5
Cryos. consts. A° / B°		
t_e °C	125.16	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7096	5
BP	0.0478	4
t_e	0.0374	5
30 mm	0.6593	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.76	5
30 mm	80.53	5
BP	68.84	5
t_e	67.29	5
t_e (d,e)	67.24	5
$\Delta Hv/T_e$	18.96	5
d (15 to 135 °C)	84.13	5
e	0.1350	5
d' to / e' °C		
d_c g/ml	0.222	5
v_c ml/g	4.50	5
t_c °C	281.	5
P_c mm	17537.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to / A^v °C		
(B^v) to / (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.03	5
30	20.10	5
40	19.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 77

NAME	6-Methyl-1-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16}; Molecular Weight 112.208	$CH_3CH(CH_2)_3CH=CH_2$ with CH_3 on C2

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.2	2
100	54.34	4
30	28.36	4
10	8.37	5
1	-24.8	5
Pressure mm 25°C	25.25	5
t_e	1041.	5
Density g/ml 20°C	0.7120	2
d^t_4 25	0.7079	2
30	0.7038	4
a	0.7284	4
b	-0.0_381	4
Ref. Index n_D 20°C	1.4070	2
25	1.4045	2
30	1.4018	4
"C"	0.7610	4
MR (Obs.)	38.79	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0510	2
Dielectric		
A (20 to 142 °C)	6.94874	5
B	1345.2	5
C	217.49	5
A* (20 to 135 °C)	1.39165	5
B*	1263.4	5
K		
c		
t_k to t_x °C		
A' (10 to 20 °C)	7.37919	5
B'	1554.37	5
C'	235.49	5
A'* (10 to 20 °C)	1.78823	5
B'*	1457.8	5
Ac (142 to t_c °C)	7.3591	5
Bc	1656.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	124.7	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7511	5
BP	0.0465	4
t_e	0.0363	5
30 mm	0.6505	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.00	5
30 mm	82.53	5
BP	70.73	5
t_e	69.19	5
t_e (d, e)	69.13	5
$\Delta Hv/T_e$	19.51	5
d (20 to 125 °C)	86.48	5
e	0.1391	5
d' e' (to °C)		
d_c g/ml	0.240	5
v_c ml/g	4.167	5
t_c °C	280.	5
P_c mm	18887.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9404	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.45	5
30	19.52	5
40	18.61	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 78

NAME	2-Methyl-2-heptene	STRUCTURAL FORMULA
		$CH_3(CH_2)_3CH=C(CH_3)CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.6	2
100	62.51	4
30	35.98	4
10	15.72	5
1	-18.21	5
Pressure mm 25°C	16.90	5
t_e	1067.3	5
Density g/ml 20°C	0.7241	2
d^t_4 25	0.7200	2
30	0.7159	4
a	0.7405	4
b	-0.0382	4
Ref. Index n_D 20°C	1.4170	2
25	1.4145	2
30	1.4120	4
"C"	0.7661	4
MR (Obs.)	38.97	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0550	2
Dielectric		
A (36 to 154 °C)	6.95927	5
B	1379.8	5
C	215.7	5
A* (36 to 145 °C)	1.39313	5
B*	1296.4	5
K		
c		
t_k to t_x °C		
A' (20 to 36 °C)	7.35134	5
B'	1584.2	5
C'	233.7	5
A'* (20 to 36 °C)	1.74623	5
B'*	1484.4	5
Ac (154 to t_c °C)	7.3692	5
Bc	1699.	5
Cc	256.	5
Cryos. consts. A°		
B°		
t_e °C	135.29	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0857	5
BP	0.0474	4
t_e	0.0363	5
30 mm	0.6646	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.82	5
30 mm	84.91	5
BP	72.71	5
t_e	70.99	5
t_e (d,e)	70.92	5
ΔHv/T_e	19.50	5
d (36 to 135 °C)	89.89	5
e	0.1408	5
d' (20 to 36 °C)	87.89	5
e'	0.0829	5
d_c g/ml	0.242	5
v_c ml/g	4.125	5
t_c °C	296.	5
P_c mm	19555.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.88	5
30	20.90	5
40	19.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 79

NAME	3-Methyl-cis-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_3C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.5	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.729	2
d^t_4 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.038	4
Ref. Index n_D 20°C	1.419	2
25	1.417	2
30	1.414	4
"C"	0.7643	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.055	2
Dielectric		
A 35 to 154 °C	6.95905	5
B	1377.7	5
C	215.82	5
A* 35 to 145 °C	1.39354	5
B*	1294.5	5
K		
c		
t_k to t_x °C		
A' 25 to 35 °C	7.35168	5
B'	1582.1	5
C'	233.82	5
A'* 25 to 35 °C	1.74680	5
B'*	1482.4	5
Ac 154 to t_c °C	7.3693	5
Bc	1698.	5
Cc	256.	5
Cryos. consts. A°		
B°		
t_e °C	134.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.59	5
t_e	70.89	5
t_e (d, e)	70.82	5
$\Delta Hv/T_e$	19.50	5
d 35 to 135 °C	89.76	5
e	0.1407	5
d' 25 to 35 °C	87.69	5
e'	0.0826	5
d_c g/ml	0.246	5
v_c ml/g	4.072	5
t_c °C	296.	5
P_c mm	19812.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.48	5
30	21.50	5
40	20.55	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 80

NAME	3-Methyl-trans-2-heptene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

STRUCTURAL FORMULA: $CH_3(CH_2)_3C(CH_3) = CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.5	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.729	2
d_4^t 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.419	2
25	1.417	2
30	1.414	4
"C"	0.7643	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.055	2
Dielectric		
A (35 to 154 °C)	6.95905	5
B	1377.7	5
C	215.82	5
A* (35 to 145 °C)	1.39354	5
B*	1294.5	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	7.35168	5
B'	1582.1	5
C'	233.82	5
A'* 25 to	1.74680	5
B'* 35 °C	1482.4	5
Ac (154 to t_c °C)	7.3693	5
Bc	1698.	5
Cc	256.	5
Cryos. consts. A°		
B°		
t_e °C	134.61	5

		Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.59	5
t_e	70.89	5
t_e (d, e)	70.82	5
$\Delta Hv/T_e$	19.50	5
d (35 to 135 °C)	89.76	5
e	0.1407	5
d' (25 to 35 °C)	87.69	5
e'	0.0826	5
d_c g/ml	0.246	5
v_c ml/g	4.072	5
t_c °C	296.	5
P_c mm	19812.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.48	5
30	21.50	5
40	20.55	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 81

NAME	4-Methyl-cis-2-heptene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3(CH_2)_2CH(CH_3)CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	114.	2
100	55.05	4
30	29.03	4
10	9.17	5
1	-24.09	5
Pressure mm 25°C	24.33	5
t_e	1043.	5
Density g/ml 20°C	0.716	2
d^t_4 25	0.712	2
30	0.708	4
a	0.732	4
b	-0.038	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.405	4
"C"	0.7624	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A 29 to 144 °C	6.95106	5
B	1348.6	5
C	217.34	5
A* 29 to 136 °C	1.39312	5
B*	1266.7	5
K		
c		
t_k to t_x °C		
A' 15 to 29 °C	7.35098	5
B'	1552.9	5
C'	235.34	5
A'* 15 to	1.74916	5
B'* 29 °C	1453.3	5
Ac 144 to t_c °C	7.3615	5
Bc	1661.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	125.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7791	5
BP	0.0465	4
t_e	0.0363	5
30 mm	0.6516	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.06	5
30 mm	82.76	5
BP	70.93	5
t_e	69.37	5
t_e (d, e)	69.32	5
ΔHv/T_e	19.52	5
d 29 to 126 °C	86.80	5
e	0.1392	5
d' 15 to 29 °C	84.95	5
e'	0.0754	5
d_c g/ml	0.242	5
v_c ml/g	4.126	5
t_c °C	282.	5
P_c mm	19144.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.92	5
30	19.99	5
40	19.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 82

NAME	4-Methyl-trans-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2CH(CH_3)CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	114.	2
100	55.05	4
30	29.03	4
10	9.17	5
1	-24.09	5
Pressure mm 25°C	24.33	5
t_e	1043.	5
Density g/ml 20°C	0.716	2
d^t_4 25	0.712	2
30	0.708	4
a	0.732	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.405	4
"C"	0.7624	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A (29 to 144 °C)	6.95106	5
B	1348.6	5
C	217.34	5
A* (29 to 136 °C)	1.39312	5
B*	1266.7	5
K		
c		
t_k to t_x °C		
A' (15 to 29 °C)	7.35098	5
B'	1552.9	5
C'	235.34	5
A'* 15 to	1.74916	5
B'* 29 °C	1453.3	5
Ac (144 to t_c °C)	7.3615	5
Bc	1661.	5
Cc	257.	5
Cryos. consts. A°		
Cryos. consts. B°		
t_e °C	125.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7791	5
BP	0.0465	4
t_e	0.0363	5
30 mm	0.6516	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.06	5
30 mm	82.76	5
BP	70.93	5
t_e	69.37	5
t_e (d, e)	69.32	5
$\Delta Hv/T_e$	19.52	5
d (29 to 126 °C)	86.80	5
e	0.1392	5
d' (15 to 29 °C)	84.95	5
e'	0.0754	5
d_c g/ml	0.242	5
v_c ml/g	4.126	5
t_c °C	282.	5
P_c mm	19144.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.92	5
30	19.99	5
40	19.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. 1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 83

NAME	5-Methyl-cis-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	118.	2
100	58.51	4
30	32.24	4
10	12.19	5
1	-21.38	5
Pressure mm 25°C	20.57	5
t_e	1055.	5
Density g/ml 20°C	0.723	2
d^t_4 25	0.719	2
30	0.715	4
a	0.739	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7620	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A 32 to 149 °C	6.95360	5
B	1362.7	5
C	216.58	5
A* 32 to 135 °C	1.39140	5
B*	1280.0	5
K		
c		
t_k to t_x °C		
A' 20 to 32 °C	7.34977	5
B'	1567.0	5
C'	234.58	5
A'* 20 to 32 °C	1.74643	5
B'*	1467.3	5
Ac 149 to t_c °C	7.3640	5
Bc	1679.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	130.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.9078	5
BP	0.0469	4
t_e	0.0363	5
30 mm	0.6577	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.31	5
30 mm	83.73	5
BP	71.76	5
t_e	70.12	5
t_e (d,e)	70.06	5
$\Delta Hv/T_e$	19.51	5
d 32 to 130 °C	88.24	5
e	0.1397	5
d' 20 to 32 °C	86.30	5
e'	0.0797	5
d_c g/ml	0.244	5
v_c ml/g	4.106	5
t_c °C	289.	5
P_c mm	19479.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9400	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.75	5
30	20.79	5
40	19.86	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 84

NAME	5-Methyl-trans-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH_2CH{=}CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	118.	2
100	58.51	4
30	32.24	4
10	12.19	5
1	-21.38	5
Pressure mm 25°C	20.57	5
t_e	1055.	5
Density g/ml 20°C	0.723	2
d_4^t 25	0.719	2
30	0.715	4
a	0.739	4
b	-0.038	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7620	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A (32 to 149 °C)	6.95360	5
B	1362.7	5
C	216.58	5
A* (32 to 135 °C)	1.39140	5
B*	1280.0	5
K		
c		
t_k to t_x °C		
A' (20 to 32 °C)	7.34977	5
B'	1567.0	5
C'	234.58	5
A'* (20 to 32 °C)	1.74643	5
B'*	1467.3	5
Ac (149 to t_c °C)	7.3640	5
Bc	1679.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	130.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.9078	5
BP	0.0469	4
t_e	0.0363	5
30 mm	0.6577	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.31	5
30 mm	83.73	5
BP	71.76	5
t_e	70.12	5
t_e (d, e)	70.06	5
ΔHv/T_e	19.51	5
d (32 to 130 °C)	88.24	5
e	0.1397	5
d' (20 to 32 °C)	86.30	5
e'	0.0797	5
d_c g/ml	0.244	5
v_c ml/g	4.106	5
t_c °C	289.	5
P_c mm	19479.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9400	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.75	5
30	20.79	5
40	19.86	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 85

NAME	6-Methyl-cis-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)(CH_2)_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	117.	2
100	57.63	4
30	31.43	4
10	11.43	5
1	-22.07	5
Pressure mm 25°C	21.47	5
t_e	1052.	5
Density g/ml 20°C	0.718	2
d^t_4 25	0.714	2
30	0.710	4
a	0.734	4
b	-0.038	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7638	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A (31 to 147 °C)	6.95222	5
B	1358.9	5
C	216.77	5
A* (31 to 139 °C)	1.39108	5
B*	1276.4	5
K		
c		
t_k to t_x °C		
A' (20 to 31 °C)	7.34929	5
B'	1563.2	5
C'	234.77	5
A'* (20 to 31 °C)	1.74633	5
B'*	1463.5	5
Ac (147 to t_c °C)	7.3625	5
Bc	1674.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	128.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8733	5
BP	0.0468	4
t_e	0.0363	5
30 mm	0.6563	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.98	5
30 mm	83.48	5
BP	71.53	5
t_e	69.92	5
t_e (d, e)	69.86	5
$\Delta Hv/T_e$	19.51	5
d (31 to 129 °C)	87.86	5
e	0.1396	5
d' (20 to 31 °C)	85.95	5
e'	0.0788	5
d_c g/ml	0.242	5
v_c ml/g	4.138	5
t_c °C	287.	5
P_c mm	19262.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.15	5
30	20.22	5
40	19.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 86

NAME	6-Methyl-trans-2-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)(CH_2)_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	117.	2
100	57.63	4
30	31.43	4
10	11.43	5
1	-22.07	5
Pressure mm 25°C	21.47	5
t_e	1052.	5
Density g/ml 20°C	0.718	2
d^t_4 25	0.714	2
30	0.710	4
a	0.734	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7638	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A (31 to 147 °C)	6.95222	5
B	1358.9	5
C	216.77	5
A* (31 to 139 °C)	1.39108	5
B*	1276.4	5
K		
c		
t_k to t_x °C		
A' (20 to 31 °C)	7.34929	5
B'	1563.2	5
C'	234.77	5
A'* (20 to 31 °C)	1.74633	5
B'*	1463.5	5
Ac (147 to t_c °C)	7.3625	5
Bc	1674.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	128.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8733	5
BP	0.0468	4
t_e	0.0363	5
30 mm	0.6563	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.98	5
30 mm	83.48	5
BP	71.53	5
t_e	69.92	5
t_e (d, e)	69.86	5
ΔHv/T_e	19.51	5
d (31 to 129 °C)	87.86	5
e	0.1396	5
d' (20 to 31 °C)	85.95	5
e'	0.0788	5
d_c g/ml	0.242	5
v_c ml/g	4.138	5
t_c °C	287.	5
P_c mm	19262.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.15	5
30	20.22	5
40	19.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 87

NAME	2-Methyl-cis-3-heptene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

$CH_3(CH_2)_2CH{=}CHCH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.706	2
d^t_4 25	0.702	2
30	0.698	4
a	0.722	4
b	-0.038	4
Ref. Index n_D 20°C	1.407	2
25	1.405	2
30	1.402	4
"C"	0.7679	4
MR (Obs.)	39.1	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 27 to 140 °C	6.94826	5
B	1341.1	5
C	217.72	5
A* 27 to 130 °C	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' 15 to 27 °C	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* 15 to 27 °C	1.74894	5
B'*	1445.8	5
Ac 140 to t_c °C	7.3585	5
Bc	1651.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.49	5
t_e	68.97	5
t_e (d, e)	68.91	5
ΔHv/T_e	19.52	5
d 27 to 123 °C	86.05	5
e	0.1390	5
d' 15 to 27 °C	84.19	5
e'	0.0708	5
d_c g/ml	0.239	5
v_c ml/g	4.190	5
t_c °C	278.	5
P_c mm	18716.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		-
Surface tension dynes/cm. γ 20°C	19.77	5
30	18.88	5
40	18.01	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 88

NAME	2-Methyl-trans-3-heptene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208
		$CH_3(CH_2)_2CH{=}CH\,CH(CH_3)\,CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.706	2
d^t_4 25	0.702	2
30	0.698	4
a	0.722	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.407	2
25	1.405	2
30	1.402	4
"C"	0.7679	4
MR (Obs.)	39.1	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (27 to 140 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (27 to 130 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k to / t_x °C		
A' (15 to 27 °C)	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* 15 to	1.74894	5
B'* 27 °C	1445.8	5
Ac (140 to t_c °C)	7.3585	5
Bc	1651.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.49	5
t_e	68.97	5
t_e (d, e)	68.91	5
$\Delta Hv/T_e$	19.52	5
d (27 to 123 °C)	86.05	5
e	0.1390	5
d' (15 to 27 °C)	84.19	5
e'	0.0708	5
d_c g/ml	0.239	5
v_c ml/g	4.190	5
t_c °C	278.	5
P_c mm	18716.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	19.77	5
30	18.88	5
40	18.01	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 89

NAME	3-Methyl-cis-3-heptene
STRUCTURAL FORMULA	$CH_3(CH_2)_2CH{=}C(CH_3)CH_2CH_3$
Mole % Pur.	Ref.
Molecular Formula	C_8H_{16}
Molecular Weight	112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	121.	2
100	61.12	4
30	34.68	4
10	14.50	5
1	-19.31	5
Pressure mm 25°C	18.09	5
t_e	1062.7	5
Density g/ml 20°C	0.728	2
d^t_4 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7637	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (35 to 153 °C)	6.95770	5
B	1374.0	5
C	216.	5
A* (35 to 143 °C)	1.39323	5
B*	1290.9	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	7.35121	5
B'	1578.3	5
C'	234.	5
A'* (25 to 35 °C)	1.74671	5
B'*	1478.6	5
Ac (153 to t_c °C)	7.3680	5
Bc	1693.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	133.48	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0203	5
BP	0.0472	4
t_e	0.0363	5
30 mm	0.6622	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.30	5
30 mm	84.51	5
BP	72.37	5
t_e	70.69	5
t_e (d, e)	70.62	5
ΔHv/T_e	19.50	5
d (35 to 133 °C)	89.38	5
e	0.1405	5
d' (25 to 35 °C)	87.35	5
e'	0.0819	5
d_c g/ml	0.246	5
v_c ml/g	4.071	5
t_c °C	294.	5
P_c mm	19746.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9392	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.36	5
30	21.38	5
40	20.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 90

NAME	3-Methyl-trans-3-heptene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3(CH_2)_2CH{=}C(CH_3)CH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	121.	2
100	61.12	4
30	34.68	4
10	14.50	5
1	-19.31	5
Pressure mm 25°C	18.09	5
t_e	1062.7	5
Density g/ml 20°C	0.728	2
d^t_4 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7637	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 35 to 153 °C	6.95770	5
B	1374.0	5
C	216.	5
A* 35 to 143 °C	1.39323	5
B*	1290.9	5
K		
c		
t_k to		
t_x °C		
A' 25 to 35 °C	7.35121	5
B'	1578.3	5
C'	234.	5
A'* 25 to 35 °C	1.74671	5
B'*	1478.6	5
Ac 153 to t_c °C	7.3680	5
Bc	1693.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	133.48	5

		Ref.
dt/dP °C/mm 25°C	1.0203	5
BP	0.0472	4
t_e	0.0363	5
30 mm	0.6622	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.30	5
30 mm	84.51	5
BP	72.37	5
t_e	70.69	5
t_e (d, e)	70.62	5
ΔHv/T_e	19.50	5
d 35 to 133 °C	89.38	5
e	0.1405	5
d' 25 to 35 °C	87.35	5
e'	0.0819	5
d_c g/ml	0.246	5
v_c ml/g	4.071	5
t_c °C	294.	5
P_c mm	19746.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9392	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.36	5
30	21.38	5
40	20.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 91

NAME	4-Methyl-cis-3-heptene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2C(CH_3) = CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.00	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.417	2
25	1.415	2
30	1.412	4
"C"	0.7651	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.055	2
Dielectric		
A (36 to 153 °C)	6.95905	5
B	1377.7	5
C	215.82	5
A* (36 to 145 °C)	1.39354	5
B*	1294.5	5
K		
c		
t_k to t_x °C		
A' (25 to 36 °C)	7.35168	5
B'	1582.1	5
C'	233.82	5
A'* 25 to	1.74680	5
B'* 36 °C	1482.4	5
Ac (153 to t_c °C)	7.3692	5
Bc	1697.	5
Cc	256.	5
Cryos. consts. A°		
B°		
t_e °C	134.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.59	5
t_e	70.88	5
t_e (d, e)	70.82	5
$\Delta Hv/T_e$	19.50	5
d (36 to 135 °C)	89.76	5
e	0.1407	5
d' (25 to 36 °C)	87.69	5
e'	0.0826	5
d_c g/ml	0.244	5
v_c ml/g	4.096	5
t_c °C	295.	5
P_c mm	19660.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.03	5
40	20.09	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 92

NAME	4-Methyl-trans-3-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2C(CH_3) = CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.00	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.417	2
25	1.415	2
30	1.412	4
"C"	0.7651	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.055	2
Dielectric		
A 36 to	6.95905	5
B 153 °C	1377.7	5
C	215.82	5
A* 36 to	1.39354	5
B* 145 °C	1294.5	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.35168	5
B' 36 °C	1582.1	5
C'	233.82	5
A'* 25 to	1.74680	5
B'* 36 °C	1482.4	5
Ac 153 to	7.3692	5
Bc t_c °C	1697.	5
Cc	256.	5
Cryos. consts. A°		
B°		
t_e °C	134.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.59	5
t_e	70.88	5
t_e (d, e)	70.82	5
$\Delta Hv/T_e$	19.50	5
d 36 to	89.76	5
e 135 °C	0.1407	5
d' 25 to	87.69	5
e' 36 °C	0.0826	5
d_c g/ml	0.244	5
v_c ml/g	4.096	5
t_c °C	295.	5
P_c mm	19660.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9391	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.03	5
40	20.09	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 93

NAME	5-Methyl-cis-3-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH=CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.713	2
d_4^t 25	0.709	2
30	0.705	4
a	0.729	4
b	-0.038	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.405	4
"C"	0.7657	4
MR (Obs.)	39.0	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 27 to 141 °C	6.94826	5
B	1341.1	5
C	217.72	5
A* 27 to 133 °C	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' 15 to 27 °C	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* 15 to 27 °C	1.74894	5
B'*	1445.8	5
Ac 141 to t_c °C	7.3588	5
Bc	1652.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.49	5
t_e	68.97	5
t_e (d, e)	68.92	5
ΔHv/T_e	19.52	5
d 27 to 123 °C	86.05	5
e	0.1389	5
d' 15 to 27 °C	84.19	5
e'	0.0709	5
d_c g/ml	0.242	5
v_c ml/g	4.140	5
t_c °C	279.	5
P_c mm	18976.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.57	5
30	19.65	5
40	18.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 94

NAME	5-Methyl-trans-3-heptene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH=CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.713	2
d^t_4 25	0.709	2
30	0.705	4
a	0.729	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.405	4
"C"	0.7657	4
MR (Obs.)	39.0	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (27 to 141 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (27 to 133 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k / t_x (to °C)		
A' (15 to 27 °C)	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* 15 to	1.74894	5
B'* 27 °C	1445.8	5
Ac (141 to t_c °C)	7.3588	5
Bc	1652.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.49	5
t_e	68.97	5
t_e (d, e)	68.92	5
$\Delta Hv/T_e$	19.52	5
d (27 to 123 °C)	86.05	5
e	0.1389	5
d' (15 to 27 °C)	84.19	5
e'	0.0709	5
d_c g/ml	0.242	5
v_c ml/g	4.140	5
t_c °C	279.	5
P_c mm	18976.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.57	5
30	19.65	5
40	18.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_C$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 95

NAME	6-Methyl-cis-3-heptene		
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

STRUCTURAL FORMULA

$CH_3CH(CH_3)CH_2CH{=}CHCH_2CH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	115.	2
100	55.93	4
30	29.85	4
10	9.94	5
1	-23.40	5
Pressure mm 25°C	23.32	5
t_e	1046.	5
Density g/ml 20°C	0.713	2
d^t_4 25	0.709	2
30	0.705	4
a	0.729	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.403	4
"C"	0.7657	4
MR (Obs.)	39.0	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 30 to	6.95245	5
B 144 °C	1352.4	5
C	217.15	5
A* 30 to	1.39344	5
B* 134 °C	1270.2	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.35146	5
B' 30 °C	1556.7	5
C'	235.15	5
A'* 20 to	1.74923	5
B'* 30 °C	1457.1	5
Ac 144 to	7.3627	5
Bc t_c °C	1665.	5
Cc	257.	5
Cryos. A° consts. B°		
t_e °C	126.72	5

		Ref.
dt/dP °C/mm		
25°C	0.8098	5
BP	0.04662	4
t_e	0.03630	5
30 mm	0.6530	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.39	5
30 mm	83.02	5
BP	71.15	5
t_e	69.57	5
t_e (d, e)	69.51	5
ΔHv/T_e	19.52	5
d 30 to	87.18	5
e 127 °C	0.1394	5
d' 20 to	85.31	5
e' 30 °C	0.0768	5
d_c g/ml	0.241	5
v_c ml/g	4.152	5
t_c °C	283.	5
P_c mm	19060.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9402	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.57	5
30	19.65	5
40	18.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 96

NAME	6-Methyl-trans-3-heptene	STRUCTURAL FORMULA
		$CH_3CH(CH_3)CH_2CH=CHCH_2CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	115.	2
100	55.93	4
30	29.85	4
10	9.94	5
1	-23.40	5
Pressure mm 25°C	23.32	5
t_e	1046.	5
Density g/ml 20°C	0.713	2
d^t_4 25	0.709	2
30	0.705	4
a	0.729	4
b	-0.038	4
Ref. Index n_D 20°C	1.410	2
25	1.408	2
30	1.403	4
"C"	0.7657	4
MR (Obs.)	39.0	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (30 to 144 °C)	6.95245	5
B	1352.4	5
C	217.15	5
A* (30 to 134 °C)	1.39344	5
B*	1270.2	5
K		
c		
t_k to t_x °C		
A' (20 to 30 °C)	7.35146	5
B'	1556.7	5
C'	235.15	5
A'* (20 to 30 °C)	1.74923	5
B'*	1457.1	5
Ac (144 to t_c °C)	7.3627	5
Bc	1665.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	126.72	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8098	5
BP	0.04662	4
t_e	0.0363	5
30 mm	0.6530	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.39	5
30 mm	83.02	5
BP	71.15	5
t_e	69.57	5
t_e (d, e)	69.51	5
$\Delta Hv/T_e$	19.52	5
d (30 to 127 °C)	87.18	5
e	0.1394	5
d' (20 to 30 °C)	85.31	5
e'	0.0768	5
d_c g/ml	0.241	5
v_c ml/g	4.152	5
t_c °C	283.	5
P_c mm	19060.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9402	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.57	5
30	19.65	5
40	18.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 97

NAME	2-Ethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_3C(C_2H_5) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	120.	2
100	60.25	4
30	33.87	4
10	13.73	5
1	-20.00	5
Pressure mm 25°C	18.88	5
t_e	1060.	5
Density g/ml 20°C	0.7270	2
d_4^t 25	0.7228	2
30	0.7186	4
a	0.7438	4
b	-0.0_383	4
Ref. Index n_D 20°C	1.4157	2
25	1.4132	2
30	1.4106	4
"C"	0.7608	4
MR (Obs.)	38.71	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0522	2
Dielectric		
A 34 to 151 °C	6.95634	5
B	1370.2	5
C	216.2	5
A* 34 to 142 °C	1.39292	5
B*	1287.3	5
K		
c		
t_k to t_x °C		
A' 25 to 34 °C	7.35072	5
B'	1575.	5
C'	234.2	5
A'* 25 to 34 °C	1.74662	5
B'*	1474.8	5
Ac 151 to t_c °C	7.3666	5
Bc	1688.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	132.35	5

Property	Value	Ref.
dt/dP °C 25°C	0.9813	5
BP	0.0471	4
t_e	0.0363	5
30 mm	0.6607	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.97	5
30 mm	84.25	5
BP	72.15	5
t_e	70.48	5
t_e (d,e)	70.42	5
$\Delta Hv/T_e$	19.50	5
d 34 to 132 °C	89.00	5
e	0.1404	5
d' 25 to 34 °C	87.00	5
e'	0.0812	5
d_c g/ml	0.244	5
v_c ml/g	4.101	5
t_c °C	292.	5
P_c mm	19527.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9495	5
t_e	0.9393	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.24	5
30	21.22	5
40	20.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 98

NAME	3-Ethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2CH(C_2H_5)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.3	2
100	51.82	4
30	26.02	4
10	6.32	5
1	-26.66	5
Pressure mm 25°C	28.46	5
t_e	1033.	5
Density g/ml 20°C	0.715	2
d^t_4 25	0.711	2
30	0.707	4
a	0.731	4
b	-0.038	4
Ref. Index n_D 20°C	1.407	2
25	1.405	2
30	1.402	4
"C"	0.7582	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A 26 to 140 °C	6.94556	5
B	1334.6	5
C	218.	5
A* 26 to 131 °C	1.39159	5
B*	1253.3	5
K		
c		
t_k to t_x °C		
A' 5 to 26 °C	7.34887	5
B'	1538.8	5
C'	236.	5
A'* 5 to 26 °C	1.74852	5
B'*	1439.3	5
Ac 140 to t_c °C	7.35634	5
Bc	1644.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	121.42	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6758	5
BP	0.0462	4
t_e	0.0363	5
30 mm	0.6461	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.86	5
30 mm	81.80	5
BP	70.12	5
t_e	68.63	5
t_e (d, e)	68.58	5
$ΔHv/T_e$	19.51	5
d 26 to 121 °C	85.41	5
e	0.1386	5
d' 5 to 26 °C	83.32	5
e'	0.0582	5
d_c g/ml	0.243	5
v_c ml/g	4.121	5
t_c °C	277.	5
P_c mm	18997.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9406	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.80	5
30	19.87	5
40	18.97	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 99

NAME	4-Ethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(C_2H_5)CH_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.	2
100	54.18	4
30	28.22	4
10	8.40	5
1	-24.78	5
Pressure mm 25°C	25.38	5
t_e	1040.	5
Density g/ml 20°C	0.726	2
d^t_4 25	0.722	2
30	0.718	4
a	0.742	4
b	-0.038	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7554	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.049	2
Dielectric		
A 28 to 130 °C	6.94966	5
B	1344.9	5
C	217.53	5
A* 28 to 120 °C	1.39289	5
B*	1263.1	5
K		
c		
t_k to t_x °C		
A' 15 to 28 °C	7.35049	5
B'	1549.1	5
C'	235.53	5
A'* 15 to	1.74901	5
B'* 28 °C	1450.0	5
Ac 130 to t_c °C	7.3559	5
Bc	1642.	5
Cc	254.	5
Cryos. consts. A°		
B°		
t_e °C	124.46	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7497	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6501	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.74	5
30 mm	82.50	5
BP	70.74	5
t_e	69.20	5
t_e (d, e)	69.14	5
$\Delta Hv/T_e$	14.69	5
d 28 to 110 °C	86.51	5
e	0.1396	5
d' 15 to 28 °C	84.58	5
e'	0.0737	5
d_c g/ml	0.201	5
v_c ml/g	4.985	5
t_c °C	264.	5
P_c mm	15331.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9400	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.11	5
30	21.14	5
40	20.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 100

NAME	2, 3-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2CH(CH_3)C(CH_3) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.5	2
100	52.02	4
30	26.21	4
10	6.51	5
1	-26.48	5
Pressure mm 25°C	28.18	5
t_e	1033.	5
Density g/ml 20°C	0.7214	2
d^t_4 25	0.7172	2
30	0.7130	4
a	0.7382	4
b	-0.0383	4
Ref. Index n_D 20°C	1.4113	2
25	1.4089	2
30	1.4063	4
"C"	0.7590	4
MR (Obs.)	38.64	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0506	2
Dielectric		
A 26 to 140°C	6.94766	5
B	1336.0	5
C	218.	5
A* 26 to 130°C	1.39348	5
B*	1254.6	5
K		
c		
t_k to		
t_x °C		
A' 15 to 26°C	7.35087	5
B'	1540.2	5
C'	236.	5
A'* 15 to 26°C	1.75034	5
B'*	1440.7	5
Ac 140 to t_c °C	7.3585	5
Bc	1646.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	121.64	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6817	5
BP	0.0462	4
t_e	0.0363	5
30 mm	0.6463	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.96	5
30 mm	81.89	5
BP	70.20	5
t_e	68.70	5
t_e (d, e)	68.65	5
ΔHv/T_e	19.52	5
d 26 to 122 °C	85.52	5
e	0.1387	5
d' 15 to 26 °C	83.50	5
e'	0.0617	5
d_c g/ml	0.244	5
v_c ml/g	4.099	5
t_c °C	278.	5
P_c mm	19130.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9406	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.55	5
30	20.56	5
40	19.58	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 101

NAME	2,4-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH_2C(CH_3) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	111.2	2
100	52.60	4
30	26.74	4
10	7.00	5
1	-26.05	5
Pressure mm 25°C	27.42	5
t_e	1035.	5
Density g/ml 20°C	0.720	2
d_4^t 25	0.716	2
30	0.712	4
a	0.736	4
b	-0.038	4
Ref. Index n_D 20°C	1.411	2
25	1.409	2
30	1.406	4
"C"	0.7600	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A 27 to 141 °C	6.94593	5
B	1337.7	5
C	217.87	5
A* 27 to 130 °C	1.39098	5
B*	1256.3	5
K		
c		
t_k to t_x °C		
A' 15 to 27 °C	7.34836	5
B'	1541.8	5
C'	235.87	5
A'* 15 to 27 °C	1.74767	5
B'*	1442.4	5
Ac 141 to t_c °C	7.3568	5
Bc	1649.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	122.44	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6991	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6475	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.13	5
30 mm	82.02	5
BP	70.30	5
t_e	68.80	5
t_e (d, e)	68.75	5
$\Delta Hv/T_e$	19.51	5
d 27 to 122 °C	85.73	5
e	0.1387	5
d' 15 to 27 °C	83.82	5
e'	0.0672	5
d_c g/ml	0.244	5
v_c ml/g	4.093	5
t_c °C	279.	5
P_c mm	19195.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9406	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.39	5
30	20.44	5
40	19.52	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 102

NAME	2, 5-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)(CH_2)_2C(CH_3)=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	111.6	2
100	52.95	4
30	27.07	4
10	7.32	5
1	-25.76	5
Pressure mm 25°C	26.95	5
t_e	1036.	5
Density g/ml 20°C	0.7172	2
d_4^t 25	0.7129	2
30	0.7086	4
a	0.7344	4
b	-0.0₃85	4
Ref. Index n_D 20°C	1.4105	2
25	1.4080	2
30	1.4057	4
"C"	0.7620	4
MR (Obs.)	38.80	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0519	2
Dielectric		
A (27 to 140 °C)	6.94709	5
B	1339.4	5
C	217.80	5
A* (27 to 130 °C)	1.39172	5
B*	1257.9	5
K		
c		
t_k to t_x °C		
A' (10 to 27 °C)	7.34919	5
B'	1543.6	5
C'	235.80	5
A'* 10 to	1.74826	5
B'* 27 °C	1444.1	5
Ac (140 to t_c °C)	7.3576	5
Bc	1650.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	122.89	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7102	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6480	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.28	5
30 mm	82.13	5
BP	70.40	5
t_e	68.88	5
t_e (d, e)	68.83	5
ΔHv/T_e	19.51	5
d (27 to 123 °C)	85.89	5
e	0.1388	5
d' (10 to 27 °C)	84.01	5
e'	0.0693	5
d_c g/ml	0.241	5
v_c ml/g	4.148	5
t_c °C	278.	5
P_c mm	18908.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.06	5
30	20.05	5
40	19.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 103

NAME	3, 3-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} ; Molecular Weight 112.208	$CH_3(CH_2)_2C(CH_3)_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	104.	2
100	46.36	4
30	20.94	4
10	1.65	5
1	-30.18	5
Pressure mm 25°C	36.97	5
t_e	1016.	5
Density g/ml 20°C	0.7140	2
d^t_4 25	0.7099	2
30	0.7058	4
a	0.7303	4
b	-0.0_381	4
Ref. Index n_D 20°C	1.4070	2
25	1.4046	2
30	1.4021	4
"C"	0.7593	4
MR (Obs.)	38.68	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0500	2
Dielectric		
A 21 to 132 °C	6.93989	5
B	1312.1	5
C	219.24	5
A* 21 to 124 °C	1.39099	5
B*	1231.5	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 132 to t_c °C	7.3512	5
Bc	1617.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	114.36	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5340	5
BP	0.0455	4
t_e	0.0363	5
30 mm	0.6365	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.70	5
30 mm	80.24	5
BP	68.88	5
t_e	67.50	5
t_e (d, e)	67.46	5
$\Delta Hv/T_e$	19.54	5
d 21 to 114 °C	83.11	5
e	0.1368	5
d' e' to °C		
d_c g/ml	0.243	5
v_c ml/g	4.115	5
t_c °C	268.	5
P_c mm	18786.	5
PV/RT 25°C	0.9991	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9422	5
t_c	0.257	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.68	5
30	19.73	5
40	18.81	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 104

NAME	3,4-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH_2CH(CH_3)CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.724	2
d^t_4 25	0.720	2
30	0.716	4
a	0.740	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.408	4
"C"	0.7592	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A (27 to 142 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (27 to 133 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' (15 to 27 °C)	7.3500	5
B'	1545.3	5
C'	236.	5
A'* (15 to 27 °C)	1.74894	5
B'*	1445.8	5
Ac (142 to t_c °C)	7.3592	5
Bc	1653.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.50	5
t_e	68.98	5
t_e (d, e)	68.93	5
ΔHv/T_e	19.52	5
d (27 to 123 °C)	86.05	5
e	0.1388	5
d' (15 to 27 °C)	84.19	5
e'	0.0710	5
d_c g/ml	0.246	5
v_c ml/g	4.068	5
t_c °C	281.	5
P_c mm	19384.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.87	5
30	20.91	5
40	19.97	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 105

NAME	3,5-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)CH_2CH(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	104.	2
100	46.36	4
30	20.94	4
10	1.65	5
1	-30.18	5
Pressure mm 25°C	36.97	5
t_e	1016.0	5
Density g/ml 20°C	0.708	2
d^t_4 25	0.704	2
30	0.700	4
a	0.724	4
b	-0.038	4
Ref. Index n_D 20°C	1.404	2
25	1.402	2
30	1.399	4
"C"	0.7604	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A (21 to 132 °C)	6.93989	5
B	1312.1	5
C	219.24	5
A* (21 to 124 °C)	1.39099	5
B*	1231.5	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (132 to t_c °C)	7.3510	5
Bc	1617.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	114.36	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5340	5
BP	0.0455	4
t_e	0.0363	5
30 mm	0.6365	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.70	5
30 mm	80.24	5
BP	68.88	5
t_e	67.50	5
t_e (d, e)	67.46	5
ΔHv/T_e	19.54	5
d (21 to 114 °C)	83.11	5
e	0.1369	5
d' e' to °C		
d_c g/ml	0.241	5
v_c ml/g	4.142	5
t_c °C	267.	5
P_c mm	18629.	5
PV/RT 25°C	0.9991	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9422	5
t_c	0.257	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.99	5
30	19.09	5
40	18.22	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 106

NAME	4,4-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2C(CH_3)_2CH_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	107.2	2
100	49.14	4
30	23.53	4
10	4.09	5
1	-27.99	5
Pressure mm 25°C	32.37	5
t_e	1025.	5
Density g/ml 20°C	0.7198	2
d^t_4 25	0.7157	2
30	0.7116	4
a	0.7361	4
b	-0.0381	4
Ref. Index n_D 20°C	1.4102	2
25	1.4078	2
30	1.4053	4
"C"	0.7588	4
MR (Obs.)	38.64	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0503	2
Dielectric		
A (24 to 136 °C)	6.94327	5
B	1323.7	5
C	218.63	5
A* (24 to 128 °C)	1.39088	5
B*	1242.5	5
K		
c		
t_k to / t_x °C		
A' to / B' °C / C'		
A'* to / B'* °C		
Ac (136 to t_c °C)	7.3545	5
Bc	1632.	5
Cc	258.	5
Cryos. consts. A° / B°		
t_e °C	117.97	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6016	5
BP	0.0458	4
t_e	0.0363	5
30 mm	0.6413	5
ΔHm cal/g		
ΔHv cal/g 25°C	71.19	5
30 mm	81.04	5
BP	69.56	5
t_e	68.12	5
t_e (d, e)	68.08	5
ΔHv/T_e	19.54	5
d (24 to 118 °C)	84.27	5
e	0.1373	5
d' to / e' °C		
d_c g/ml	0.245	5
v_c ml/g	4.089	5
t_c °C	273.	5
P_c mm	19079.	5
PV/RT 25°C	0.8807	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9419	5
t_c	0.257	5
ΔHc kcal/m / ΔHf / ΔFf		
Viscosity centistokes η °C		
B^v to / A^v °C		
(B^v) to / (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.36	5
30	20.40	5
40	19.46	5
Parachor [P] 20°C / 30 / 40		
Sugd.	335.2	5
Exp. L. l. %/wt. / u.		
Dispersion	117.	2
Flash Point °C / Fire Point		
M Spec. / Ultra V. / X-Ray Dif. / Infrared		
Solubility in + Acetone / Carbon tet. / Benzene / Ether / n-Heptane / Ethanol / Water / Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 107

NAME	4, 5-Dimethyl-1-hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH(CH_3)CH(CH_3)CH_2CH=CH_2$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	109.	2
100	50.69	4
30	24.96	4
10	5.44	5
1	-26.78	5
Pressure mm 25°C	30.06	5
t_e	1030.	5
Density g/ml 20°C	0.728	2
d_4^t 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7568	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A 25 to 140 °C	6.94402	5
B	1329.8	5
C	218.29	5
A* 25 to 130 °C	1.38967	5
B*	1248.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac 140 to t_c °C	7.3554	5
Bc	1641.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	120.00	5

		Ref.
dt/dP °C/mm 25°C	0.6431	5
BP	0.0460	4
t_e	0.0363	5
30 mm	0.6441	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.03	5
30 mm	81.47	5
BP	69.92	5
t_e	68.46	5
t_e (d, e)	68.41	5
ΔHv/T_e	19.54	5
d 25 to 120 °C	84.91	5
e	0.1374	5
d' to °C		
e'		
d_c g/ml	0.248	5
v_c ml/g	4.038	5
t_c °C	277.	5
P_c mm	19460.	5
PV/RT 25°C	0.9703	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9418	5
t_c	0.257	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. 20°C	22.35	5
γ 30	21.37	5
40	20.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_C$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 108

NAME	5,5-Dimethyl-1-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)_2(CH_2)_2CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	102.5	2
100	45.07	4
30	19.74	4
10	0.52	5
1	-31.19	5
Pressure mm 25°C	39.31	5
t_e	1013.	5
Density g/ml 20°C	0.709	2
d_4^t 25	0.705	2
30	0.701	4
a	0.725	4
b	-0.038	4
Ref. Index n_D 20°C	1.4049	2
25	1.4024	2
30	1.4001	4
"C"	0.7609	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0501	2
Dielectric		
A 20 to 130 °C	6.93924	5
B	1306.9	5
C	219.52	5
A* 20 to 120 °C	1.39022	5
B*	1226.2	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 130 to t_c °C	7.3505	5
Bc	1610.6	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	112.71	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5054	5
BP	0.0453	4
t_e	0.0362	5
30 mm	0.6341	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.19	5
30 mm	79.89	5
BP	68.65	5
t_e	67.30	5
t_e (d, e)	67.26	5
ΔHv/T_e	19.57	5
d 20 to 113 °C	82.57	5
e	0.1358	5
d' e' to °C		
d_c g/ml	0.244	5
v_c ml/g	4.101	5
t_c °C	265.	5
P_c mm	18670.	5
PV/RT 25°C	0.9991	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9434	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.10	5
30	19.21	5
40	18.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 109

NAME	3-Ethyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH{=}C(C_2H_5)(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	121.	2
100	61.12	4
30	34.68	4
10	14.50	5
1	-19.31	5
Pressure mm 25°C	18.09	5
t_e	1063.	5
Density g/ml 20°C	0.737	2
d^t_4 25	0.733	2
30	0.729	4
a	0.753	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7646	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.056	2
Dielectric		
A (35 to 154 °C)	6.95770	5
B	1374.0	5
C	216.	5
A* (35 to 144 °C)	1.39234	5
B*	1290.7	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	7.35121	5
B'	1578.3	5
C'	234.	5
A'* 25 to	1.74671	5
B'* 35 °C	1478.6	5
Ac (154 to t_c °C)	7.3684	5
Bc	1694.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	133.50	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.020	5
BP	0.0472	4
t_e	0.0363	5
30 mm	0.6622	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.30	5
30 mm	84.51	5
BP	72.42	5
t_e	70.73	5
t_e (d,e)	70.67	5
ΔHv/T_e	19.52	5
d (35 to 134 °C)	89.36	5
e	0.1400	5
d' (25 to 35 °C)	87.35	5
e'	0.0819	5
d_c g/ml	0.248	5
v_c ml/g	4.030	5
t_c °C	296.	5
P_c mm	20096.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9397	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.49	5
30	22.47	5
40	21.49	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ — [+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 110

NAME	3-Ethyl-trans-2-hexene

STRUCTURAL FORMULA

$CH_3(CH_2)_2C(C_2H_5) = CH\text{-}CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_8H_{16}	112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	121.	2
100	61.12	4
30	34.68	4
10	14.50	5
1	-19.31	5
Pressure mm 25°C	18.09	5
t_e	1063.	5
Density g/ml 20°C	0.737	2
d^t_4 25	0.733	2
30	0.729	4
a	0.753	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7646	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.056	2
Dielectric		
A (35 to 154 °C)	6.95770	5
B	1374.0	5
C	216.	5
A* (35 to 144 °C)	1.39234	5
B*	1290.7	5
K		
c		
t_k to		
t_x °C		
A' (25 to 35 °C)	7.35121	5
B'	1578.3	5
C'	234.	5
A'* 25 to	1.74671	5
B'* 35 °C	1478.6	5
Ac (154 to t_c °C)	7.3684	5
Bc	1694.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	133.50	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0203	5
BP	0.0472	4
t_e	0.0363	5
30 mm	0.6622	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.30	5
30 mm	84.51	5
BP	72.42	5
t_e	70.73	5
t_e (d, e)	70.67	5
$\Delta Hv/T_e$	19.52	5
d (35 to 134 °C)	89.36	5
e	0.1400	5
d' (25 to 35 °C)	87.35	5
e'	0.0819	5
d_c g/ml	0.248	5
v_c ml/g	4.030	5
t_c °C	296.	5
P_c mm	20096.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9397	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.49	5
30	22.47	5
40	21.49	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.	2
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\, T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 111

NAME	4-Ethyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(C_2H_5)CH{=}CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.	2
100	54.18	4
30	28.22	4
10	8.40	5
1	-24.78	5
Pressure mm 25°C	25.38	5
t_e	1040.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7564	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A 20 to 144 °C	6.94966	5
B	1344.9	5
C	217.53	5
A* 20 to 134 °C	1.39279	5
B*	1263.1	5
K		
c		
t_k to t_x °C		
A' 15 to 20 °C	7.3505	5
B'	1549.1	5
C'	235.53	5
A'* 15 to 20 °C	1.74901	5
B'*	1450.	5
Ac 144 to t_c °C	7.3606	5
Bc	1658.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	124.47	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7500	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6501	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.95	5
30 mm	82.50	5
BP	70.72	5
t_e	69.18	5
t_e (d, e)	69.13	5
$\Delta Hv/T_e$	19.52	5
d 20 to 124 °C	86.42	5
e	0.1390	5
d' to °C		
e'		
d_c g/ml	0.246	5
v_c ml/g	4.061	5
t_c °C	282.	5
P_c mm	19451.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9404	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 112

NAME	4-Ethyl-trans-2-hexene	STRUCTURAL FORMULA
		$CH_3CH_2CH(C_2H_5)CH=CHCH_3$
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.	2
100	54.18	4
30	28.22	4
10	8.40	5
1	-24.78	5
Pressure mm 25°C	25.38	5
t_e	1040.	5
Density g/ml 20°C	0.725	2
d^t_4 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.038	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.407	4
"C"	0.7564	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A (20 to 144 °C)	6.94966	5
B	1344.9	5
C	217.53	5
A* (20 to 134 °C)	1.39279	5
B*	1263.1	5
K		
c		
t_k to t_x °C		
A' (15 to 20 °C)	7.3505	5
B'	1549.1	5
C'	235.53	5
A'* 15 to	1.74901	5
B'* 20 °C	1450.	5
Ac (144 to t_c °C)	7.3606	5
Bc	1658.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	124.47	5

		Ref.
dt/dP °C/mm 25°C	0.750	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6501	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.95	5
30 mm	82.50	5
BP	70.72	5
t_e	69.18	5
t_e (d, e)	69.13	5
$\Delta Hv/T_e$	19.52	5
d (28 to 124 °C)	86.42	5
e	0.1390	5
d' to e' °C		
d_c g/ml	0.246	5
v_c ml/g	4.061	5
t_c °C	282.	5
P_c mm	19451.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9404	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 113

NAME	2,3-Dimethyl-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2C = C\ CH_3$ with CH_3 on each double-bond carbon (CH_3CH_3)

Property	Value	Ref.
F.P. °C	-115.1	2
F.P. 100%		
B.P. °C 760 mm	121.77	2
100	61.77	4
30	35.28	4
10	15.05	5
1	-18.81	5
Pressure mm 25°C	17.54	5
t_e	1066.	5
Density g/ml 20°C	0.7408	2
d^t_4 25	0.7366	2
30	0.7324	4
a	0.7576	4
b	-0.0384	4
Ref. Index n_D 20°C	1.4268	2
25	1.4244	2
30	1.4217	4
"C"	0.7654	4
MR (Obs.)	38.87	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0564	2
Dielectric		
A (35 to 154 °C)	6.95670	5
B	1376.2	5
C	215.86	5
A* (35 to 144 °C)	1.39053	5
B*	1292.8	5
K		
c		
t_k to t_x °C		
A' (25 to 35 °C)	7.34943	5
B'	1580.5	5
C'	233.86	5
A'* 25 to	1.74467	5
B'* 35 °C	1480.7	5
Ac (154 to t_c °C)	7.36734	5
Bc	1697.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	134.38	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0500	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6635	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.51	5
30 mm	84.67	5
BP	72.55	5
t_e	70.85	5
t_e (d, e)	70.78	5
$\Delta Hv/T_e$	19.51	5
d (35 to 134 °C)	89.61	5
e	0.1401	5
d' (25 to 35 °C)	87.57	5
e'	0.0824	5
d_c g/ml	0.248	5
v_c ml/g	4.040	5
t_c °C	297.	5
P_c mm	20079.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9397	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.97	5
30	22.90	5
40	21.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 114

NAME	2,4-Dimethyl-2-hexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3CH_2CH(CH_3)CH=C(CH_3)CH_3$
Molecular Formula C_8H_{16}	Molecular Weight 112.208	

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.6	2
100	52.08	4
30	26.26	4
10	6.55	5
1	-26.45	5
Pressure mm 25°C	28.11	5
t_e	1034.	5
Density g/ml 20°C	0.7213	2
d^t_4 25	0.7171	2
30	0.7129	4
a	0.7381	4
b	-0.0₃83	4
Ref. Index n_D 20°C	1.4118	2
25	1.4094	2
30	1.4067	4
"C"	0.7600	4
MR (Obs.)	38.69	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0512	2
Dielectric		
A 20 to 140 °C	6.94568	5
B	1335.7	5
C	218.	5
A* 20 to 130 °C	1.39139	5
B*	1254.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 140 to t_c °C	7.3565	5
Bc	1646.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	121.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6835	5
BP	0.0462	4
t_e	0.0363	5
30 mm	0.6466	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.95	5
30 mm	81.87	5
BP	70.18	5
t_e	68.69	5
t_e (d, e)	68.64	5
ΔHv/T_e	19.51	5
d 20 to 122 °C	85.51	5
e	0.1386	5
d' to e' °C		
d_c g/ml	0.244	5
v_c ml/g	4.106	5
t_c °C	278.	5
P_c mm	19100.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9406	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.54	5
30	20.54	5
40	19.57	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 115

NAME	2,5-Dimethyl-2-hexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH\ CH_2CH{=}C\ CH_3$ (with CH_3 on C-2 and C-5)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.2	2
100	53.47	4
30	27.55	4
10	7.77	5
1	-25.36	5
Pressure mm 25°C	26.28	5
t_e	1038.	5
Density g/ml 20°C	0.720	2
d_4^t 25	0.716	2
30	0.712	4
a	0.736	4
b	-0.038	4
Ref. Index n_D 20°C	1.4140	2
25	1.4115	2
30	1.4091	4
"C"	0.7652	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (20 to 142 °C)	6.94734	5
B	1341.5	5
C	217.68	5
A* (20 to 134 °C)	1.39132	5
B*	1259.8	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (142 to t_c °C)	7.3581	5
Bc	1653.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	123.57	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7265	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6490	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.63	5
30 mm	82.27	5
BP	70.52	5
t_e	69.00	5
t_e (d, e)	68.94	5
ΔHv/T_e	19.51	5
d (20 to 124 °C)	86.10	5
e	0.1388	5
d' e' to °C		
d_c g/ml	0.244	5
v_c ml/g	4.094	5
t_c °C	280.	5
P_c mm	19225.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.39	5
30	20.44	5
40	19.52	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 116

NAME	3,4-Dimethyl-cis-2-hexene	STRUCTURAL FORMULA
		$CH_3CH_2CH\,C = CHCH_3$ / $CH_3\ CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	116.	2
100	56.76	4
30	30.61	4
10	10.66	5
1	-22.77	5
Pressure mm 25°C	22.40	5
t_e	1049.	5
Density g/ml 20°C	0.737	2
d_4^t 25	0.733	2
30	0.729	4
a	0.753	4
b	-0.038	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7543	4
MR (Obs.)	38.4	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A 31 to 148 °C	6.95084	5
B	1355.2	5
C	216.96	5
A* 31 to 138 °C	1.39076	5
B*	1272.8	5
K		
c		
t_k to t_x °C		
A' 20 to 31 °C	7.34881	5
B'	1559.4	5
C'	234.96	5
A'* 20 to	1.74623	5
B'* 31 °C	1459.8	5
Ac 148 to t_c °C	7.3620	5
Bc	1672.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	127.86	5

		Ref.
dt/dP °C/mm 25°C	0.8401	5
BP	0.0467	4
t_e	0.0363	5
30 mm	0.6548	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.66	5
30 mm	83.22	5
BP	71.33	5
t_e	69.74	5
t_e (d,e)	69.68	5
ΔHv/T_e	19.51	5
d 31 to 128 °C	87.48	5
e	0.1393	5
d' 20 to 31 °C	85.60	5
e'	0.0779	5
d_c g/ml	0.249	5
v_c ml/g	4.010	5
t_c °C	289.	5
P_c mm	19946.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.48	5
30	22.47	5
40	21.48	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 117

NAME	3,4-Dimethyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	116.	2
100	56.76	4
30	30.61	4
10	10.66	5
1	-22.77	5
Pressure mm 25°C	22.40	5
t_e	1049.	5
Density g/ml 20°C	0.737	2
d^t_4 25	0.733	2
30	0.729	4
a	0.753	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7543	4
MR (Obs.)	38.4	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A (31 to 148 °C)	6.95084	5
B	1355.2	5
C	216.96	5
A* (31 to 138 °C)	1.39076	5
B*	1272.8	5
K		
c		
t_k to t_x °C		
A' (20 to 31 °C)	7.34881	5
B'	1559.4	5
C'	234.96	5
A'* (20 to 31 °C)	1.74623	5
B'*	1459.8	5
Ac (148 to t_c °C)	7.3620	5
Bc	1672.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	127.86	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8401	5
BP	0.0467	4
t_e	0.0363	5
30 mm	0.6548	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.66	5
30 mm	83.22	5
BP	71.33	5
t_e	69.74	5
t_e (d,e)	69.68	5
$\Delta Hv/T_e$	19.51	5
d (31 to 128 °C)	87.48	5
e	0.1393	5
d' (20 to 31 °C)	85.60	5
e'	0.0779	5
d_c g/ml	0.249	5
v_c ml/g	4.010	5
t_c °C	289.	5
P_c mm	19946.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.48	5
30	22.47	5
40	21.48	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 118

NAME	3,5-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH\,CH_2C = CHCH_3$ with CH_3 branches on the 2nd and 4th carbons

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.038	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7634	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (27 to 142 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (27 to 133 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' (15 to 27 °C)	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* (15 to 27 °C)	1.74894	5
B'*	1445.8	5
Ac (142 to t_c °C)	7.3593	5
Bc	1653.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.50	5
t_e	68.98	5
t_e (d, e)	68.93	5
ΔHv/T_e	19.52	5
d (27 to 123 °C)	86.05	5
e	0.1388	5
d' (15 to 27 °C)	84.19	5
e'	0.0710	5
d_c g/ml	0.246	5
v_c ml/g	4.060	5
t_c °C	281.	5
P_c mm	19421.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 119

NAME	3,5-Dimethyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)CH_2C(CH_3) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.725	2
d^t_4 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.411	4
"C"	0.7634	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 27 to 142 °C	6.94826	5
B	1341.1	5
C	217.72	5
A* 27 to 133 °C	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' 15 to 27 °C	7.35001	5
B'	1545.3	5
C'	235.72	5
A'* 15 to 27 °C	1.74894	5
B'*	1445.8	5
Ac 142 to t_c °C	7.3593	5
Bc	1653.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.42	5
30 mm	82.25	5
BP	70.50	5
t_e	68.98	5
t_e (d, e)	68.93	5
$\Delta Hv/T_e$	19.52	5
d 27 to 123 °C	86.05	5
e	0.1388	5
d' 15 to 27 °C	84.19	5
e'	0.0710	5
d_c g/ml	0.246	5
v_c ml/g	4.060	5
t_c °C	281.	5
P_c mm	19421.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B_v to °C		
A_v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 120

NAME	4,4-Dimethyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2C(CH_3)_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	106.	2
100	48.11	4
30	22.57	4
10	3.19	5
1	-28.80	5
Pressure mm 25°C	34.01	5
t_e	1020.	5
Density g/ml 20°C	0.722	2
d_4^t 25	0.718	2
30	0.714	4
a	0.738	4
b	-0.038	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.409	4
"C"	0.7613	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A (22 to 136 °C)	6.94277	5
B	1319.6	5
C	218.86	5
A* (22 to 136 °C)	1.39347	5
B*	1239.1	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (136 to t_c °C)	7.3542	5
Bc	1627.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	116.57	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5755	5
BP	0.0457	4
t_e	0.0363	5
30 mm	0.6395	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.42	5
30 mm	80.76	5
BP	69.25	5
t_e	67.83	5
t_e (d, e)	67.79	5
$\Delta Hv/T_e$	19.53	5
d (22 to 130 °C)	83.87	5
e	0.1380	5
d' e' (to °C)		
d_c g/ml	0.248	5
v_c ml/g	4.038	5
t_c °C	272.	5
P_c mm	19212.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9410	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.62	5
30	20.68	5
40	19.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 121

NAME	4,4-Dimethyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH_2C(CH_3)_2CH{=}CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	106.	2
100	48.11	4
30	22.57	4
10	3.19	5
1	-28.80	5
Pressure mm 25°C	34.01	5
t_e	1020.	5
Density g/ml 20°C	0.722	2
d^t_4 25	0.718	2
30	0.714	4
a	0.738	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.409	4
"C"	0.7613	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A 22 to 136 °C	6.94277	5
B	1319.6	5
C	218.86	5
A* 22 to 136 °C	1.39347	5
B*	1239.1	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac 136 to t_c °C	7.3542	5
Bc	1627.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	116.57	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5755	5
BP	0.0457	4
t_e	0.0363	5
30 mm	0.6395	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.42	5
30 mm	80.76	5
BP	69.25	5
t_e	67.83	5
t_e (d, e)	67.79	5
ΔHv/T_e	19.53	5
d 22 to 130 °C	83.87	5
e	0.1380	5
d' to e' °C		
d_c g/ml	0.248	5
v_c ml/g	4.038	5
t_c °C	272.	5
P_c mm	19212.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9410	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.62	5
30	20.68	5
40	19.76	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 122

NAME	4, 5-Dimethyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH\,CH\,CH{=}CHCH_3$ with CH_3, CH_3 substituents

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.	2
100	51.56	4
30	25.78	4
10	6.10	5
1	-26.86	5
Pressure mm 25°C	28.82	5
t_e	1032.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.038	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.408	4
"C"	0.7582	4
MR (Obs.)	38.6	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A (20 to 140 °C)	6.94544	5
B	1333.6	5
C	218.	5
A* (20 to 131 °C)	1.39179	5
B*	1252.4	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (140 to t_c °C)	7.3566	5
Bc	1645.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	121.08	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6682	5
BP	0.0461	4
t_e	0.0363	5
30 mm	0.6456	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.77	5
30 mm	81.73	5
BP	70.07	5
t_e	68.58	5
t_e (d, e)	68.53	5
$\Delta Hv/T_e$	19.52	5
d (20 to 121 °C)	85.30	5
e	0.1385	5
d' e' (to °C)		
d_c g/ml	0.247	5
v_c ml/g	4.051	5
t_c °C	278.	5
P_c mm	19361.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9407	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 123

NAME	4, 5-Dimethyl-trans-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH\ CH\ CH{=}CHCH_3$ (CH_3 on C4 and C5)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.	2
100	51.56	4
30	25.78	4
10	6.10	5
1	-26.86	5
Pressure mm 25°C	28.82	5
t_e	1032.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.038	4
Ref. Index n_D 20°C	1.413	2
25	1.411	2
30	1.408	4
"C"	0.7582	4
MR (Obs.)	38.6	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A 20 to 140 °C	6.94544	5
B	1333.6	5
C	218.	5
A* 20 to 131 °C	1.39179	5
B*	1252.4	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 140 to t_c °C	7.3566	5
Bc	1645.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	121.08	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6682	5
BP	0.0461	4
t_e	0.0363	5
30 mm	0.6456	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.77	5
30 mm	81.73	5
BP	70.07	5
t_e	68.58	5
t_e (d, e)	68.53	5
ΔHv/T_e	19.52	5
d 20 to 121 °C	85.30	5
e	0.1385	5
d' e' to °C		
d_c g/ml	0.247	5
v_c ml/g	4.051	5
t_c °C	278.	5
P_c mm	19361.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9407	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 124

NAME	5,5-Dimethyl-cis-2-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)_2CH_2CH{=}CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	106.9	2
100	48.88	4
30	23.29	4
10	3.86	5
1	-28.19	5
Pressure mm 25°C	32.77	5
t_e	1023.	5
Density g/ml 20°C	0.7169	2
d_4^t 25	0.7125	2
30	0.7081	4
a	0.7344	4
b	-0.0387	4
Ref. Index n_D 20°C	1.4113	2
25	1.4088	2
30	1.4060	4
"C"	0.7638	4
MR (Obs.)	38.89	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0528	2
Dielectric		
A 23 to 135 °C	6.94315	5
B	1322.7	5
C	218.69	5
A* 23 to 126 °C	1.39286	5
B*	1242.0	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 135 to t_c °C	7.35404	5
Bc	1629.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	117.58	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5950	5
BP	0.0458	4
t_e	0.0363	5
30 mm	0.6409	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.74	5
30 mm	80.97	5
BP	69.42	5
t_e	67.99	5
t_e (d, e)	67.94	5
ΔHv/T_e	19.52	5
d 23 to 118 °C	84.19	5
e	0.1382	5
d' to °C		
e'		
d_c g/ml	0.242	5
v_c ml/g	4.128	5
t_c °C	271.	5
P_c mm	18758.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9409	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.02	5
30	20.00	5
40	19.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 125

NAME	5,5-Dimethyl-trans-2-hexene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3C(CH_3)_2CH_2CH=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	104.1	2
100	46.46	4
30	21.04	4
10	1.74	5
1	-30.09	5
Pressure mm 25°C	36.79	5
t_e	1015.	5
Density g/ml 20°C	0.7066	2
d_4^t 25	0.7023	2
30	0.6980	4
a	0.7237	4
b	-0.0385	4
Ref. Index n_D 20°C	1.4055	2
25	1.4030	2
30	1.4002	4
"C"	0.7646	4
MR (Obs.)	38.96	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0522	2
Dielectric		
A (20 to 131 °C)	6.94095	5
B	1312.7	5
C	219.22	5
A* (20 to 122 °C)	1.39372	5
B*	1232.6	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (131 to t_c °C)	7.3518	5
Bc	1616.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	114.43	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5363	5
BP	0.0455	4
t_e	0.0363	5
30 mm	0.6366	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.74	5
30 mm	80.29	5
BP	68.84	5
t_e	67.45	5
t_e (d, e)	67.41	5
$\Delta Hv/T_e$	19.52	5
d (20 to 120 °C)	83.19	5
e	0.1379	5
d' to °C		
e'		
d_c g/ml	0.24	5
v_c ml/g	4.17	5
t_c °C	266.	5
P_c mm	18389.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9412	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.83	5
30	18.87	5
40	17.94	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 126

NAME	3-Ethyl-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2C(C_2H_5) = CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	116.	2
100	56.76	4
30	30.61	4
10	10.66	5
1	-22.77	5
Pressure mm 25°C	22.40	5
t_e	1049.	5
Density g/ml 20°C	0.729	2
d^t_4 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7626	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 31 to 147 °C	6.95084	5
B	1355.2	5
C	217.	5
A* 31 to 138 °C	1.39076	5
B*	1272.8	5
K		
c		
t_k to t_x °C		
A' 15 to 31 °C	7.34881	5
B'	1559.4	5
C'	235.	5
A'* 15 to	1.74623	5
B'* 31 °C	1459.8	5
Ac 147 to t_c °C	7.3617	5
Bc	1671.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	127.86	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8401	5
BP	0.0467	4
t_e	0.0363	5
30 mm	0.6548	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.66	5
30 mm	83.22	5
BP	71.32	5
t_e	69.73	5
t_e (d, e)	69.67	5
ΔHv/T_e	19.51	5
d 31 to 128 °C	87.48	5
e	0.1393	5
d' 15 to 31 °C	85.60	5
e'	0.0779	5
d_c g/ml	0.246	5
v_c ml/g	4.057	5
t_c °C	287.	5
P_c mm	19646.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.48	5
30	21.50	5
40	20.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 127

NAME	2,2-Dimethyl-cis-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)_2$ CH=CH CH_2CH_3

Property	Value	Ref.
F.P. °C	-137.350	2
F.P. 100%		
B.P. °C 760 mm	105.43	2
100	47.59	4
30	22.07	4
10	2.71	5
1	-29.23	5
Pressure mm 25°C	34.89	5
t_e	1019.	5
Density g/ml 20°C	0.7128	2
d_4^t 25	0.7086	2
30	0.7044	4
a	0.7295	4
b	-0.0383	4
Ref. Index n_D 20°C	1.4099	2
25	1.4074	2
30	1.4049	4
"C"	0.7657	4
MR (Obs.)	38.99	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0535	2
Dielectric		
A 22 to	6.93979	5
B 134 °C	1316.7	5
C	218.97	5
A* 22 to	1.39110	5
B* 126 °C	1236.3	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 134 to	7.3508	5
Bc t_c °C	1622.	5
Cc	258.	5
Cryos. A°		
consts. B°		
t_e °C	115.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5627	5
BP	0.0457	4
t_e	0.0363	5
30 mm	0.6388	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.17	5
30 mm	80.57	5
BP	69.08	5
t_e	67.67	5
t_e (d, e)	67.63	5
ΔHv/T_e	19.51	5
d 22 to	83.62	5
e 125 °C	0.1379	5
d' to		
e' °C		
d_c g/ml	0.242	5
v_c ml/g	4.130	5
t_c °C	269.	5
P_c mm	18677.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9411	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.54	5
30	19.58	5
40	18.64	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 128

NAME	2,2-Dimethyl-trans-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)_2CH{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	100.85	2
100	43.64	4
30	18.40	4
10	-0.74	5
1	-32.33	5
Pressure mm 25°C	42.09	5
t_e	1006.	5
Density g/ml 20°C	0.7039	2
d_4^t 25	0.6995	2
30	0.6949	4
a	0.7218	4
b	-0.0388	4
Ref. Index n_D 20°C	1.4063	2
25	1.4037	2
30	1.4011	4
"C"	0.7689	4
MR (Obs.)	39.18	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0544	2
Dielectric		
A (15 to 127 °C)	6.93699	5
B	1300.8	5
C	219.84	5
A* (15 to 120 °C)	1.39334	5
B*	1221.2	5
K		
c		
t_k to, t_x °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac (127 to t_c °C)	7.3479	5
Bc	1601.	5
Cc	258.	5
Cryos. consts. A°, B°		
t_e °C	110.77	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4755	5
BP	0.0452	4
t_e	0.0363	5
30 mm	0.6317	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.56	5
30 mm	79.47	5
BP	68.14	5
t_e	66.81	5
t_e (d, e)	66.78	5
$\Delta Hv/T_e$	19.53	5
d (15 to 120 °C)	81.99	5
e	0.1374	5
d', e' to °C		
d_c g/ml	0.239	5
v_c ml/g	4.189	5
t_c °C	260.	5
P_c mm	18108.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9415	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.53	5
30	18.54	5
40	17.58	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	121.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 129

NAME	2, 3-Dimethyl-cis-3-hexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH\ C = CH\ CH_2CH_3$ / $CH_3\ CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	114.	2
100	55.05	4
30	29.03	4
10	9.17	5
1	-24.09	5
Pressure mm 25°C	24.33	5
t_e	1043.	5
Density g/ml 20°C	0.728	2
d_4^t 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.038	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.402	4
"C"	0.7602	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A (29 to 145 °C)	6.95106	5
B	1348.6	5
C	217.34	5
A* (29 to 140 °C)	1.39312	5
B*	1266.7	5
K		
c		
t_k to t_x °C		
A' (15 to 29 °C)	7.35098	5
B'	1552.9	5
C'	235.34	5
A'* 15 to	1.74916	5
B'* 29 °C	1453.3	5
Ac (145 to t_c °C)	7.3620	5
Bc	1663.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	125.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7791	5
BP	0.0465	4
t_e	0.0363	5
30 mm	0.6516	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.06	5
30 mm	82.76	5
BP	70.94	5
t_e	69.38	5
t_e (d, e)	69.33	5
ΔHv/T_e	19.52	5
d (29 to 135 °C)	86.80	5
e	0.1391	5
d' (20 to 29 °C)	84.95	5
e'	0.0755	5
d_c g/ml	0.247	5
v_c ml/g	4.05	5
t_c °C	284.	5
P_c mm	19592.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.25	5
30	21.28	5
40	20.41	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ — [+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 130

NAME	2, 3-Dimethyl-trans-3-hexene	STRUCTURAL FORMULA
		$CH_3CH\ C = CH\ CH_2CH_3$ CH_3CH_3

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	114.	2
100	55.05	4
30	29.03	4
10	9.17	5
1	-24.09	5
Pressure mm 25°C	24.33	5
t_e	1043.	5
Density g/ml 20°C	0.728	2
d^t_4 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.416	2
25	1.414	2
30	1.402	4
"C"	0.7602	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A 29 to	6.95106	5
B 145 °C	1348.6	5
C	217.34	5
A* 29 to	1.39312	5
B* 140 °C	1266.7	5
K		
c		
t_k to		
t_x °C		
A' 15 to	7.35098	5
B' 29 °C	1552.9	5
C'	235.34	5
A'* 15 to	1.74916	5
B'* 29 °C	1453.3	5
Ac 145 to	7.3620	5
Bc t_c °C	1663.	5
Cc	257.	5
Cryos. A° consts. B°		
t_e °C	125.59	5

		Ref.
dt/dP °C/mm 25°C	0.7791	5
BP	0.0465	4
t_e	0.0363	5
30 mm	0.6516	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.06	5
30 mm	82.76	5
BP	70.94	5
t_e	69.38	5
t_e (d, e)	69.33	5
ΔHv/T_e	19.52	5
d 29 to	86.80	5
e 135 °C	0.1391	5
d' 20 to	84.95	5
e' 29 °C	0.0755	5
d_c g/ml	0.247	5
v_c ml/g	4.05	5
t_c °C	284.	5
P_c mm	19592.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.25	5
30	21.28	5
40	20.41	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 131

NAME	2,4-Dimethyl-cis-3-hexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Structural formula: $CH_3CH\ CH{=}C\ CH_2CH_3$ with CH_3 on the second and fourth carbons.

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	109.0	2
100	50.69	4
30	24.96	4
10	5.44	5
1	-26.78	5
Pressure mm 25°C	30.06	5
t_e	1029.	5
Density g/ml 20°C	0.7178	2
d^t_4 25	0.7135	2
30	0.7095	4
a	0.7343	4
b	-0.0_382	4
Ref. Index n_D 20°C	1.4140	2
25	1.4114	2
30	1.4088	4
"C"	0.7675	4
MR (Obs.)	39.06	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0551	2
Dielectric		
A 20 to 138 °C	6.94402	5
B	1329.8	5
C	218.29	5
A* 20 to 135 °C	1.39145	5
B*	1248.8	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 138 to t_c °C	7.3549	5
Bc	1639.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	119.96	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6431	5
BP	0.0460	4
t_e	0.0363	5
30 mm	0.6441	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.47	5
30 mm	81.47	5
BP	69.84	5
t_e	68.38	5
t_e (d, e)	68.32	5
$\Delta Hv/T_e$	19.51	5
d 20 to 130 °C	84.93	5
e	0.1384	5
d' e' to °C		
d_c g/ml	0.244	5
v_c ml/g	4.109	5
t_c °C	275.	5
P_c mm	18980.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9407	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.12	5
30	20.16	5
40	19.21	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 132

NAME	2, 4-Dimethyl-trans-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)CH=C(CH_3)CH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	107.6	2
100	49.50	4
30	23.86	4
10	4.40	5
1	-27.70	5
Pressure mm 25°C	31.82	5
t_e	1025.	5
Density g/ml 20°C	0.7145	2
d_4^t 25	0.7101	2
30	0.7056	4
a	0.7323	4
b	-0.0$_3$88	4
Ref. Index n_D 20°C	1.4126	2
25	1.4101	2
30	1.4076	4
"C"	0.7686	4
MR (Obs.)	39.13	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0554	2
Dielectric		
A 23 to 135 °C	6.94445	5
B	1325.4	5
C	218.56	5
A* 23 to 130 °C	1.39341	5
B*	1244.6	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 135 to t_c °C	7.3551	5
Bc	1632.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	118.37	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6109	5
BP	0.0459	4
t_e	0.0363	5
30 mm	0.6419	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.00	5
30 mm	81.16	5
BP	69.57	5
t_e	68.13	5
t_e (d, e)	68.08	5
ΔHv/T_e	19.52	5
d 23 to 130 °C	84.46	5
e	0.1383	5
d' e' to °C		
d_c g/ml	0.240	5
v_c ml/g	4.161	5
t_c °C	272.	5
P_c mm	18641.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9409	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.74	5
30	19.71	5
40	18.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 133

NAME	2,5-Dimethyl-cis-3-hexene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)CH{=}CHCH(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	102.	2
100	44.62	4
30	19.31	4
10	0.1120	5
1	-31.56	5
Pressure mm 25°C	40.18	5
t_e	1009.	5
Density g/ml 20°C	0.710	2
d_4^t 25	0.706	2
30	0.702	4
a	0.726	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.406	2
25	1.404	2
30	1.402	4
"C"	0.7618	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A 15 to 130 °C	6.93698	5
B	1304.5	5
C	219.62	5
A* 15 to 120 °C	1.39205	5
B*	1224.8	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 130 to t_c °C	7.3483	5
Bc	1608.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	112.07	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4958	5
BP	0.0453	4
t_e	0.0363	5
30 mm	0.6335	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.96	5
30 mm	79.73	5
BP	68.37	5
t_e	67.03	5
t_e (d, e)	66.99	5
ΔHv/T_e	19.52	5
d 15 to 120 °C	82.38	5
e	0.1374	5
d' e' to °C		
d_c g/ml	0.244	5
v_c ml/g	4.103	5
t_c °C	264.	5
P_c mm	18625.	5
PV/RT 25°C	0.9989	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9414	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	20.22	5
30	19.31	5
40	18.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt. u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 134

NAME	2,5-Dimethyl-trans-3-hexene	STRUCTURAL FORMULA
		$CH_3CH(CH_3)CH=CHCH(CH_3)CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	102.	2
100	44.62	4
30	19.31	4
10	0.1120	5
1	-31.56	5
Pressure mm 25°C	40.18	5
t_e	1009.	5
Density g/ml 20°C	0.710	2
d_4^t 25	0.706	2
30	0.702	4
a	0.726	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.406	2
25	1.404	2
30	1.402	4
"C"	0.7618	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A (15 to 130 °C)	6.93698	5
B	1304.5	5
C	219.62	5
A* (15 to 120 °C)	1.39205	5
B*	1224.8	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (130 to t_c °C)	7.3483	5
Bc	1608.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	112.07	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4958	5
BP	0.0453	4
t_e	0.0363	5
30 mm	0.6335	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.96	5
30 mm	79.73	5
BP	68.37	5
t_e	67.03	5
t_e (d, e)	66.99	5
$\Delta Hv/T_e$	19.52	5
d (15 to 120 °C)	82.38	5
e	0.1374	5
d' to °C		
e'		
d_c g/ml	0.244	5
v_c ml/g	4.103	5
t_c °C	264.	5
P_c mm	18625.	5
PV/RT 25°C	0.9989	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9414	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.22	5
30	19.31	5
40	18.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	119.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 135

NAME	3,4-Dimethyl-cis-3-hexene	STRUCTURAL FORMULA
		$CH_3CH_2C = C\ CH_2CH_3$ / $CH_3\ CH_3$

Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.00	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.747	2
d^t_4 25	0.743	2
30	0.739	4
a	0.763	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.430	2
25	1.428	2
30	1.425	4
"C"	0.7644	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.057	2
Dielectric		
A (36 to 156 °C)	6.95905	5
B	1377.7	5
C	215.82	5
A* (36 to 145 °C)	1.39265	5
B*	1294.3	5
K		
c		
t_k to t_x °C		
A' (20 to 36 °C)	7.35168	5
B'	1582.1	5
C'	233.82	5
A'* (20 to 36 °C)	1.74680	5
B'*	1482.4	5
Ac (156 to t_c °C)	7.3700	5
Bc	1700.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	134.63	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.64	5
t_e	70.94	5
t_e (d, e)	70.87	5
ΔHv/T_e	19.52	5
d (36 to 135 °C)	89.74	5
e	0.1401	5
d' (20 to 36 °C)	87.70	5
e'	0.0826	5
d_c g/ml	0.252	5
v_c ml/g	3.970	5
t_c °C	299.	5
P_c mm	20507.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9396	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.79	5
30	23.73	5
40	22.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 136

NAME	3,4-Dimethyl-trans-3-hexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

Structural formula: $CH_3CH_2C = C\ CH_2CH_3$ with CH_3 on each C of the double bond (CH_3CH_3)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	122.	2
100	62.00	4
30	35.50	4
10	15.27	5
1	-18.61	5
Pressure mm 25°C	17.33	5
t_e	1066.	5
Density g/ml 20°C	0.747	2
d_4^t 25	0.743	2
30	0.739	4
a	0.763	4
b	-0.038	4
Ref. Index n_D 20°C	1.430	2
25	1.428	2
30	1.425	4
"C"	0.7644	4
MR (Obs.)	38.8	2
MR (Calc.)	38.677	5
(nD-d/2)	1.057	2
Dielectric		
A 36 to 156 °C	6.95905	5
B	1377.7	5
C	215.82	5
A* 36 to 145 °C	1.39265	5
B*	1294.3	5
K		
c		
t_k to t_x °C		
A' 20 to 36 °C	7.35168	5
B'	1582.1	5
C'	233.82	5
A'* 20 to	1.74680	5
B'* 36 °C	1482.4	5
Ac 156 to t_c °C	7.3700	5
Bc	1700.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	134.63	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0610	5
BP	0.0473	4
t_e	0.0363	5
30 mm	0.6637	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.63	5
30 mm	84.76	5
BP	72.64	5
t_e	70.94	5
t_e (d, e)	70.87	5
ΔHv/T_e	19.52	5
d 36 to 135 °C	89.74	5
e	0.1401	5
d' 20 to 36 °C	87.70	5
e'	0.0826	5
d_c g/ml	0.252	5
v_c ml/g	3.970	5
t_c °C	299.	5
P_c mm	20507.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9396	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.79	5
30	23.73	5
40	22.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 137

NAME	2-n-Propyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3(CH_2)_2C{=}CH_2$ / C_3H_7
Molecular Formula C_8H_{16}	Molecular Weight 112.208	

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	117.7	2
100	58.25	4
30	32.00	4
10	-11.97	5
1	-21.58	5
Pressure mm 25°C	20.83	5
t_e	1054.0	5
Density g/ml 20°C	0.7240	2
d^t_4 25	0.7198	2
30	0.7156	4
a	0.7408	4
b	-0.0_3834	4
Ref. Index n_D 20°C	1.4136	2
25	1.4111	2
30	1.4085	4
"C"	0.7603	4
MR (Obs.)	38.69	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0516	2
Dielectric		
A 32 to	6.9535	5
B 148 °C	1361.6	5
C	216.64	5
A* 32 to	1.3916	5
B* 138 °C	1279.0	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.350	5
B' 32 °C	1566.0	5
C'	234.64	5
A'* 20 to	1.7467	5
B'* 32 °C	1466.27	5
Ac 148 to	7.3638	5
Bc t_c °C	1677.4	5
Cc	256.71	5
Cryos. A° consts. B°		
t_e °C	129.78	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8975	5
BP	0.0469	4
t_e	0.0363	5
30 mm	0.6573	5
ΔHm cal/g		
ΔHv cal/g 25°C	84.22	5
30 mm	83.66	5
BP	71.69	5
t_e	70.07	5
t_e (d,e)	70.01	5
$\Delta Hv/T_e$	19.51	5
d 32 to	88.13	5
e 130 °C	0.1397	5
d' 20 to	86.20	5
e' 32 °C	0.0794	5
d_c g/ml	0.243	5
v_c ml/g	4.123	5
t_c °C	288.	5
P_c mm	19365.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9400	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C γ	21.87	5
30	20.86	5
40	19.89	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	123.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 138

NAME	2-Isopropyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3(CH_2)_2C{=}CH_2$, $CH(CH_3)_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	113.	2
100	54.18	4
30	28.22	4
10	8.40	5
1	-24.78	5
Pressure mm 25°C	25.38	5
t_e	1040.	5
Density g/ml 20°C	0.725	2
d_4^t 25	0.721	2
30	0.717	4
a	0.741	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.414	2
25	1.412	2
30	1.409	4
"C"	0.7599	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.052	2
Dielectric		
A 25 to 144 °C	6.94966	5
B	1344.9	5
C	217.53	5
A* 25 to 134 °C	1.39279	5
B*	1263.1	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 144 to t_c °C	7.3606	5
Bc	1658.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	124.47	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7497	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6501	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.95	5
30 mm	82.50	5
BP	70.72	5
t_e	69.18	5
t_e (d, e)	69.13	5
$\Delta Hv/T_e$	19.52	5
d 25 to 124 °C	86.42	5
e	0.1390	5
d' e' to °C		
d_c g/ml	0.246	5
v_c ml/g	4.061	5
t_c °C	282.	5
P_c mm	19451.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9404	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.99	5
30	21.02	5
40	20.08	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. 1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 139

NAME	2-Ethyl-3-methyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH_2CH(CH_3)C(C_2H_5) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.5	2
100	53.73	4
30	27.79	4
10	7.99	5
1	-25.16	5
Pressure mm 25°C	25.96	5
t_e	1039.	5
Density g/ml 20°C	0.729	2
d_4^t 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.038	4
Ref. Index n_D 20°C	1.4142	2
25	1.4118	2
30	1.4094	4
"C"	0.7561	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A (25 to 143 °C)	6.94746	5
B	1342.5	5
C	217.62	5
A* (25 to 134 °C)	1.39112	5
B*	1260.8	5
K		
c		
t_k to t_x °C		
A', B', C' (to °C)		
A'*, B'* (to °C)		
Ac (143 to t_c °C)	7.3586	5
Bc	1656.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	123.91	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7348	5
BP	0.0464	4
t_e	0.0363	5
30 mm	0.6495	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.73	5
30 mm	82.35	5
BP	70.59	5
t_e	69.06	5
t_e (d, e)	69.00	5
ΔHv/T_e	19.51	5
d (25 to 124 °C)	86.20	5
e	0.1388	5
d', e' (to °C)		
d_c g/ml	0.248	5
v_c ml/g	4.038	5
t_c °C	282.	5
P_c mm	19563.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9404	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	22.48	5
30	21.50	5
40	20.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 140

NAME	2-Ethyl-4-methyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)CH_2C(C_2H_5)=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.3	2
100	51.82	4
30	26.02	4
10	6.32	5
1	-26.66	5
Pressure mm 25°C	28.46	5
t_e	1033.	5
Density g/ml 20°C	0.7195	2
d^t_4 25	0.7152	2
30	0.7109	4
a	0.7367	4
b	-0.0385	4
Ref. Index n_D 20°C	1.4105	2
25	1.4080	2
30	1.4053	4
"C"	0.7596	4
MR (Obs.)	38.68	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0508	2
Dielectric		
A (20 to 139 °C)	6.94556	5
B	1334.6	5
C	218.	5
A* (20 to 130 °C)	1.39159	5
B*	1253.3	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (139 to t_c °C)	7.3563	5
Bc	1644.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	121.42	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6758	5
BP	0.0462	4
t_e	0.0363	5
30 mm	0.6461	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.95	5
30 mm	81.80	5
BP	70.12	5
t_e	68.63	5
t_e (d, e)	68.58	5
$\Delta Hv/T_e$	19.51	5
d (20 to 121 °C)	85.41	5
e	0.1386	5
d' e' (to °C)		
d_c g/ml	0.242	5
v_c ml/g	4.128	5
t_c °C	277.	5
P_c mm	18963.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9406	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	21.33	5
30	20.31	5
40	19.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 141

NAME	3-Ethyl-2-methyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3CH_2CH\ C = CH_2$ / $C_2H_5CH_3$
Molecular Formula	C_8H_{16}	
Molecular Weight	112.208	

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.	2
100	51.56	4
30	25.78	4
10	6.10	5
1	-26.86	5
Pressure mm 25°C	28.82	5
t_e	1032.	5
Density g/ml 20°C	0.730	2
d^t_4 25	0.726	2
30	0.722	4
a	0.746	4
b	-0.038	4
Ref. Index n_D 20°C	1.415	2
25	1.413	2
30	1.410	4
"C"	0.7564	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.050	2
Dielectric		
A 20 to 141 °C	6.94544	5
B	1333.6	5
C	218.	5
A* 20 to 131 °C	1.39179	5
B*	1252.4	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 141 to t_c °C	7.3568	5
Bc	1645.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	121.08	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6682	5
BP	0.0461	4
t_e	0.0363	5
30 mm	0.6456	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.84	5
30 mm	81.73	5
BP	70.07	5
t_e	68.59	5
t_e (d, e)	68.54	5
$\Delta Hv/T_e$	19.52	5
d 20 to 121 °C	85.30	5
e	0.1385	5
d' e' to °C		
d_c g/ml	0.249	5
v_c ml/g	4.020	5
t_c °C	279.	5
P_c mm	19545.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9407	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.60	5
30	21.61	5
40	20.65	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 142

NAME	3-Ethyl-3-methyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} ; Molecular Weight 112.208	$CH_3CH_2C(CH_3)(C_2H_5)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.7305	2
d_4^t 25	0.7264	2
30	0.7223	4
a	0.7469	4
b	-0.0381	4
Ref. Index n_D 20°C	1.418	2
25	1.416	2
30	1.413	4
"C"	0.7611	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A (20 to 143 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (20 to 133 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (143 to t_c °C)	7.3594	5
Bc	1654.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.45	5
30 mm	82.25	5
BP	70.50	5
t_e	68.99	5
t_e (d,e)	68.93	5
$\Delta Hv/T_e$	19.52	5
d (20 to 123 °C)	86.05	5
e	0.1388	5
d' to e' °C		
d_c g/ml	0.248	5
v_c ml/g	4.039	5
t_c °C	282.	5
P_c mm	19557.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.66	5
30	21.65	5
40	20.67	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 143

NAME	3-Ethyl-4-methyl-1-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH\ CH\ CH{=}CH_2$ / $CH_3\ C_2H_5$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	107.5	2
100	49.40	4
30	23.77	4
10	4.31	5
1	-27.79	5
Pressure mm 25°C	31.97	5
t_e	1025.	5
Density g/ml 20°C	0.7200	2
d_4^t 25	0.7158	2
30	0.7116	4
a	0.7367	4
b	-0.0383	4
Ref. Index n_D 20°C	1.4097	2
25	1.4072	2
30	1.4047	4
"C"	0.7577	4
MR (Obs.)	38.59	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0497	2
Dielectric		
A 20 to 137°C	6.94340	5
B	1324.7	5
C	218.57	5
A* 20 to 137°C	1.39246	5
B*	1243.9	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 137 to t_c °C	7.3545	5
Bc	1633.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	118.26	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6083	5
BP	0.0459	4
t_e	0.0363	5
30 mm	0.6418	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.95	5
30 mm	81.12	5
BP	69.54	5
t_e	68.10	5
t_e (d,e)	68.06	5
$\Delta Hv/T_e$	19.52	5
d 20 to 130 °C	84.40	5
e	0.1382	5
d' e' to °C		
d_c g/ml	0.245	5
v_c ml/g	4.088	5
t_c °C	273.	5
P_c mm	19008.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9409	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.38	5
30	20.40	5
40	19.43	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 144

NAME	2, 3, 3-Trimethyl-1-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH_2C(CH_3)(CH_3)C(CH_3)=CH_2$

		Ref.
F.P. °C	-69.	2
F.P. 100%		
B.P. °C 760 mm	108.31	2
100	50.12	4
30	24.45	4
10	4.96	5
1	-27.20	5
Pressure mm 25°C	30.87	5
t_e	1027.	5
Density g/ml 20°C	0.7352	2
d_4^t 25	0.7308	2
30	0.7263	4
a	0.7529	4
b	-0.0388	4
Ref. Index n_D 20°C	1.4174	2
25	1.4151	2
30	1.4128	4
"C"	0.7552	4
MR (Obs.)	38.41	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0498	2
Dielectric		
A 20 to	6.94586	5
B 139 °C	1328.2	5
C	218.42	5
A* 20 to	1.39405	5
B* 130 °C	1247.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 139 to	7.3573	5
Bc t_c °C	1638.	5
Cc	258.	5
Cryos. A°		
consts. B°		
t_e °C	119.17	5

		Ref.
dt/dP °C/mm		
25°C	0.6276	5
BP	0.0459	4
t_e	0.0363	5
30 mm	0.6429	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.27	5
30 mm	81.35	5
BP	69.75	5
t_e	68.30	5
t_e (d, e)	68.25	5
$\Delta Hv/T_e$	19.53	5
d 20 to	84.73	5
e 125 °C	0.1383	5
d' to		
e' °C		
d_c g/ml	0.25	5
v_c ml/g	4.0	5
t_c °C	276.	5
P_c mm	19451.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9408	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C γ	23.25	5
30	22.14	5
40	21.06	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 145

NAME	2, 3, 4-Trimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH\ CH\ C = CH_2$; $CH_3CH_3CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	108.	2
100	49.82	4
30	24.15	4
10	4.67	5
1	-27.47	5
Pressure mm 25°C	31.35	5
t_e	1026.	5
Density g/ml 20°C	0.729	2
d^t_4 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.0₃8	4
Ref. Index n_D 20°C	1.415	2
25	1.413	2
30	1.411	4
"C"	0.7575	4
MR (Obs.)	38.6	2
MR (Calc.)	38.677	5
(nD-d/2)	1.051	2
Dielectric		
A 20 to 139 °C	6.9426	5
B	1326.1	5
C	218.48	5
A* 20 to 129 °C	1.39111	5
B*	1245.2	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 139 to t_c °C	7.3541	5
Bc	1636.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	118.83	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6194	5
BP	0.0459	4
t_e	0.0363	5
30 mm	0.6427	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.10	5
30 mm	81.22	5
BP	69.63	5
t_e	68.19	5
t_e (d, e)	68.14	5
ΔHv/T_e	19.52	5
d 20 to 125 °C	84.55	5
e	0.1381	5
d' e' to °C		
d_c g/ml	0.249	5
v_c ml/g	4.015	5
t_c °C	276.	5
P_c mm	19460.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9408	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.47	5
30	21.50	5
40	20.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 146

NAME	2, 4, 4-Trimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3C(CH_3)_2CH_2C(CH_3)=CH_2$

		Ref.
F.P. °C	-93.480	2
F.P. 100%		
B.P. °C 760 mm	101.44	2
100	44.14	4
30	18.87	4
10	-0.30	5
1	-31.93	5
Pressure mm 25°C	41.10	5
t_e	1007.	5
Density g/ml 20°C	0.7150	2
d^t_4 25	0.7108	2
30	0.7065	4
a	0.7319	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4086	2
25	1.4060	2
30	1.4034	4
"C"	0.7611	4
MR (Obs.)	38.76	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0511	2
Dielectric		
A (15 to 129 °C)	6.93714	5
B	1302.8	5
C	219.73	5
A* (15 to 120 °C)	1.39284	5
B*	1223.1	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (129 to t_c °C)	7.3486	5
Bc	1606.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	111.43	5

		Ref.
dt/dP °C/mm 25°C	0.4858	5
BP	0.0452	4
t_e	0.0363	5
30 mm	0.6326	5
ΔHm cal/g		
ΔHv cal/g 25°C	78.75	5
30 mm	79.60	5
BP	68.26	5
t_e	66.93	5
t_e (d, e)	66.89	5
ΔHv/T_e	19.52	5
d (18 to 120 °C)	82.20	5
e	0.1373	5
d' to °C		
e'		
d_c g/ml	0.244	5
v_c ml/g	4.10	5
t_c °C	264.	5
P_c mm	18658.	5
PV/RT 25°C	0.9984	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9414	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.79	5
30	19.81	5
40	18.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 147

NAME	3, 3, 4-Trimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208

Structural formula: $CH_3CH(CH_3)C(CH_3)(CH_3)CH=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	105.	2
100	47.24	4
30	21.76	4
10	2.42	5
1	-29.49	5
Pressure mm 25°C	35.46	5
t_e	1018.	5
Density g/ml 20°C	0.729	2
d^t_4 25	0.725	2
30	0.721	4
a	0.745	4
b	-0.038	4
Ref. Index n_D 20°C	1.4144	2
25	1.4120	2
30	1.4096	4
"C"	0.7564	4
MR (Obs.)	38.5	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0499	2
Dielectric		
A (15 to 135 °C)	6.94133	5
B	1315.8	5
C	219.	5
A* (15 to 120 °C)	1.39312	5
B*	1235.5	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac (135 to t_c °C)	7.3531	5
Bc	1624.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	115.44	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5543	5
BP	0.0456	4
t_e	0.0363	5
30 mm	0.6380	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.06	5
30 mm	80.50	5
BP	69.03	5
t_e	67.64	5
t_e (d, e)	67.59	5
ΔHv/T_e	19.53	5
d (15 to 125 °C)	83.50	5
e	0.1378	5
d' e' to °C		
d_c g/ml	0.25	5
v_c ml/g	3.99	5
t_c °C	271.	5
P_c mm	19425.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9411	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.47	5
30	21.50	5
40	20.55	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 148

NAME	3,4,4-Trimethyl-1-pentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208

Structural formula: $CH_3C(CH_3)_2\text{-}CH(CH_3)\text{-}CH{=}CH_2$ (printed as CH3 / CH3C CH CH=CH2 / CH3CH3)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	104.	2
100	46.36	4
30	20.94	4
10	1.65	5
1	-30.18	5
Pressure mm 25°C	36.97	5
t_e	1015.	5
Density g/ml 20°C	0.719	2
d^t_4 25	0.715	2
30	0.711	4
a	0.735	4
b	-0.038	4
Ref. Index n_D 20°C	1.412	2
25	1.410	2
30	1.408	4
"C"	0.7628	4
MR (Obs.)	38.9	2
MR (Calc.)	38.677	5
(nD-d/2)	1.053	2
Dielectric		
A 15 to	6.93989	5
B 133 °C	1312.1	5
C	219.24	5
A* 15 to	1.39277	5
B* 120 °C	1231.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 133 to	7.3514	5
Bc t_c °C	1618.	5
Cc	258.	5
Cryos. A° consts. B°		
t_e °C	114.32	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.534	5
BP	0.0455	4
t_e	0.0363	5
30 mm	0.6365	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.69	5
30 mm	80.24	5
BP	68.81	5
t_e	67.43	5
t_e (d, e)	67.39	5
ΔHv/T_e	19.53	5
d 15 to	83.13	5
e 120 °C	0.1377	5
d' to		
e' °C		
d_c g/ml	0.247	5
v_c ml/g	4.055	5
t_c °C	268.	5
P_c mm	18987.	5
PV/RT 25°C	1.1161	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9412	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.26	5
30	20.31	5
40	19.38	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	117.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 149

NAME	3-Ethyl-2-methyl-2-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH_2C = C\ CH_3$ / $C_2H_5CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	117.0	2
100	57.63	4
30	31.43	4
10	11.43	5
1	-22.07	5
Pressure mm 25°C	21.47	5
t_e	1052.	5
Density g/ml 20°C	0.739	2
d^t_4 25	0.735	2
30	0.731	4
a	0.755	4
b	-0.0$_3$8	4
Ref. Index n_D 20°C	1.4247	2
25	1.4222	2
30	1.4198	4
"C"	0.7637	4
MR (Obs.)	39.0	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0552	2
Dielectric		
A (31 to 149 °C)	6.95222	5
B	1358.9	5
C	216.77	5
A* (31 to 139 °C)	1.39108	5
B*	1276.4	5
K		
c		
t_k to t_x °C		
A' (15 to 31 °C)	7.34929	5
B'	1563.2	5
C'	234.77	5
A'* 15 to	1.74633	5
B'* 31 °C	1463.5	5
Ac (149 to t_c °C)	7.3633	5
Bc	1677.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	128.99	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8733	5
BP	0.0468	4
t_e	0.0363	5
30 mm	0.6563	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.98	5
30 mm	83.48	5
BP	71.55	5
t_e	69.94	5
t_e (d, e)	69.88	5
ΔHv/T_e	19.51	5
d (31 to 129 °C)	87.86	5
e	0.1394	5
d' (15 to 31 °C)	85.95	5
e'	0.0789	5
d_c g/ml	0.250	5
v_c ml/g	3.996	5
t_c °C	290.	5
P_c mm	20052.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.74	5
30	22.72	5
40	21.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 150

NAME	3-Ethyl-4-methyl-cis-2-pentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

STRUCTURAL FORMULA: $CH_3CH(CH_3)C(C_2H_5) = CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	116.	2
100	56.76	4
30	30.61	4
10	10.66	5
1	-22.77	5
Pressure mm 25°C	22.40	5
t_e	1049.	5
Density g/ml 20°C	0.739	2
d^t_4 25	0.735	2
30	0.731	4
a	0.755	4
b	-0.038	4
Ref. Index n_D 20°C	1.424	2
25	1.422	2
30	1.419	4
"C"	0.7625	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 31 to 148 °C	6.95084	5
B	1355.2	5
C	217.	5
A* 31 to 138 °C	1.39076	5
B*	1272.8	5
K		
c		
t_k to t_x °C		
A' 15 to 31 °C	7.34881	5
B'	1559.4	5
C'	235.	5
A'* 15 to 31 °C	1.74623	5
B'*	1459.8	5
Ac 148 to t_c °C	7.3620	5
Bc	1672.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	127.86	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.8401	5
BP	0.0467	4
t_e	0.0363	5
30 mm	0.6548	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.66	5
30 mm	83.22	5
BP	71.33	5
t_e	69.74	5
t_e (d, e)	69.68	5
ΔHv/T_e	19.51	5
d 31 to 128 °C	87.48	5
e	0.1392	5
d' 15 to 31 °C	85.60	5
e'	0.0779	5
d_c g/ml	0.250	5
v_c ml/g	3.995	5
t_c °C	289.	5
P_c mm	20021.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C, A^v		
(B^v) to °C, (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.74	5
30	22.72	5
40	21.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75 T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 151

NAME	3-Ethyl-4-methyl-trans-2-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	$CH_3CH(CH_3)C(C_2H_5)=CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	114.3	2
100	55.31	4
30	29.27	4
10	9.40	5
1	-23.89	5
Pressure mm 25°C	24.03	5
t_e	1044.	5
Density g/ml 20°C	0.7350	2
d_4^t 25	0.7308	2
30	0.7266	4
a	0.7518	4
b	-0.0_383	4
Ref. Index n_D 20°C	1.4210	2
25	1.4183	2
30	1.4158	4
"C"	0.7615	4
MR (Obs.)	38.71	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0535	2
Dielectric		
A (29 to 146 °C)	6.95117	5
B	1349.7	5
C	217.28	5
A* (29 to 136 °C)	1.39291	5
B*	1267.6	5
K		
c		
t_k to t_x °C		
A' (15 to 29 °C)	7.35081	5
B'	1553.9	5
C'	235.28	5
A'* (15 to 29 °C)	1.74885	5
B'*	1454.3	5
Ac (146 to t_c °C)	7.3622	5
Bc	1665.	5
Cc	257.	5
Cryos. consts. A°		
B°		
t_e °C	125.93	5

		Ref.
dt/dP °C/mm		
25°C	0.7881	5
BP	0.0466	4
t_e	0.0363	5
30 mm	0.6520	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.16	5
30 mm	82.83	5
BP	71.00	5
t_e	69.44	5
t_e (d, e)	69.38	5
$\Delta Hv/T_e$	19.52	5
d (29 to 126 °C)	86.90	5
e	0.1391	5
d' (15 to 29 °C)	85.05	5
e'	0.0760	5
d_c g/ml	0.248	5
v_c ml/g	4.028	5
t_c °C	285.	5
P_c mm	19717.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9403	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	23.23	5
30	22.17	5
40	21.15	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 152

NAME	2, 3, 4-Trimethyl-2-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH\ C = C \cdot CH_3$ / $CH_3CH_3CH_3$ (CH, C and C carry the CH_3 groups below)

		Ref.
F.P. °C	-113.3	2
F.P. 100%		
B.P. °C 760 mm	116.26	2
100	57.02	4
30	30.86	4
10	10.90	5
1	-22.54	5
Pressure mm 25°C	22.11	5
t_e	1050.	5
Density g/ml 20°C	0.7434	2
d^t_4 25	0.7391	2
30	0.7348	4
a	0.7606	4
b	-0.0_385	4
Ref. Index n_D 20°C	1.4275	2
25	1.4249	2
30	1.4223	4
"C"	0.7639	4
MR (Obs.)	38.79	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0558	2
Dielectric		
A 31 to	6.95353	5
B 149 °C	1356.9	5
C	217.	5
A* 31 to	1.39318	5
B* 138 °C	1274.5	5
K		
c		
t_k to		
t_x °C		
A' 15 to	7.35138	5
B' 31 °C	1561.2	5
C'	235.	5
A'* 15 to	1.74869	5
B'* 31 °C	1461.6	5
Ac 149 to	7.3646	5
Bc t_c °C	1674.	5
Cc	257.	5
Cryos. consts. A° B°		
t_e °C	128.15	5

		Ref.
dt/dP °C/mm 25°C	0.8499	5
BP	0.0467	4
t_e	0.0363	5
30 mm	0.6550	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.79	5
30 mm	83.33	5
BP	71.43	5
t_e	69.83	5
t_e (d, e)	69.77	5
ΔHv/T_e	19.52	5
d 31 to	87.63	5
e 135 °C	0.1394	5
d' 15 to	85.74	5
e' 31 °C	0.0782	5
d_c g/ml	0.250	5
v_c ml/g	3.997	5
t_c °C	289.	5
P_c mm	20011.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9401	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	24.31	5
30	23.19	5
40	22.11	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	127.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 153

NAME	2,4,4-Trimethyl-2-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)_2CH{=}C(CH_3)CH_3$

Property	Value	Ref.
F.P. °C	-106.330	2
F.P. 100%		
B.P. °C 760 mm	104.91	2
100	47.15	4
30	21.67	4
10	2.33	5
1	-29.57	5
Pressure mm 25°C	35.62	5
t_e	1017.	5
Density g/ml 20°C	0.7218	2
d^t_4 25	0.7176	2
30	0.7133	4
a	0.7387	4
b	-0.0_384	4
Ref. Index n_D 20°C	1.4160	2
25	1.4135	2
30	1.4110	4
"C"	0.7668	4
MR (Obs.)	39.01	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0551	2
Dielectric		
A 15 to 134 °C	6.94038	5
B	1315.2	5
C	219.07	5
A* 15 to 120 °C	1.39226	5
B*	1234.9	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 134 to t_c °C	7.3517	5
Bc	1622.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	115.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5523	5
BP	0.0456	4
t_e	0.0363	5
30 mm	0.6379	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.01	5
30 mm	80.46	5
BP	68.99	5
t_e	67.60	5
t_e (d, e)	67.56	5
ΔHv/T_e	19.52	5
d 15 to 120 °C	83.45	5
e	0.1378	5
d' e' to °C		
d_c g/ml	0.245	5
v_c ml/g	4.073	5
t_c °C	270.	5
P_c mm	18976.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9411	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.60	5
30	20.59	5
40	19.60	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	125.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene°		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 154

NAME	3,4,4-Trimethyl-cis-2-pentene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3C(CH_3)(CH_3)C(CH_3)=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.739	2
d^t_4 25	0.735	2
30	0.731	4
a	0.755	4
b	-0.038	4
Ref. Index n_D 20°C	1.423	2
25	1.421	2
30	1.418	4
"C"	0.7608	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A (20 to 144 °C)	6.94826	5
B	1341.1	5
C	217.72	5
A* (20 to 133 °C)	1.39246	5
B*	1259.5	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (144 to t_c °C)	7.3598	5
Bc	1655.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.58	5
30 mm	82.25	5
BP	70.51	5
t_e	68.99	5
t_e (d,e)	68.94	5
$\Delta Hv/T_e$	19.52	5
d (20 to 123 °C)	86.05	5
e	0.1387	5
d' e' (to °C)		
d_c g/ml	0.252	5
v_c ml/g	3.969	5
t_c °C	283.	5
P_c mm	19940.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	23.74	5
30	22.71	5
40	21.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 155

NAME	3,4,4-Trimethyl-trans-2-pentene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208	CH_3 / CH_3C $C = CHCH_3$ / CH_3CH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	112.	2
100	53.31	4
30	27.41	4
10	7.64	5
1	-25.47	5
Pressure mm 25°C	26.48	5
t_e	1038.	5
Density g/ml 20°C	0.739	2
d_4^t 25	0.735	2
30	0.731	4
a	0.755	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.423	2
25	1.421	2
30	1.418	4
"C"	0.7608	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.054	2
Dielectric		
A 20 to	6.94826	5
B 144 °C	1341.1	5
C	217.72	5
A* 20 to	1.39246	5
B* 133 °C	1259.5	5
K		
c		
t_k to / t_x °C		
A' to / B' °C / C'		
A'* to / B'* °C		
Ac 144 to	7.3598	5
Bc t_c °C	1655.	5
Cc	258.	5
Cryos. consts. A° / B°		
t_e °C	123.34	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.7214	5
BP	0.0463	4
t_e	0.0363	5
30 mm	0.6486	5
ΔHm cal/g		
ΔHv cal/g 25°C	82.58	5
30 mm	82.25	5
BP	70.51	5
t_e	68.99	5
t_e (d,e)	68.94	5
$\Delta Hv/T_e$	19.52	5
d 20 to	86.05	5
e 123 °C	0.1387	5
d' to / e' °C		
d_c g/ml	0.252	5
v_c ml/g	3.969	5
t_c °C	283.	5
P_c mm	19940.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9405	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to / A^v °C		
(B^v) to / (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f / g / h to °K		
f' / g' / h' to °K		
m / n / o to °K		
m' / n' / o' to °K		
Surface tension dynes/cm. γ 20°C	23.74	5
30	22.71	5
40	21.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	124.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II; Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 156

NAME	2-Isopropyl-3-methyl-1-butene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} / Molecular Weight 112.208	$CH_3CH(CH_3)C(CH(CH_3)_2)=CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	104.	2
100	46.36	4
30	20.94	4
10	1.65	5
1	-30.18	5
Pressure mm 25°C	36.97	5
t_e	1015.	5
Density g/ml 20°C	0.722	2
d_4^t 25	0.718	2
30	0.714	4
a	0.738	4
b	-0.038	4
Ref. Index n_D 20°C	1.4085	2
25	1.4061	2
30	1.4037	4
"C"	0.7535	4
MR (Obs.)	38.4	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0475	2
Dielectric		
A 15 to 133 °C	6.9399	5
B	1312.1	5
C	219.24	5
A* 15 to 125 °C	1.39277	5
B*	1231.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 133 to t_c °C	7.3515	5
Bc	1618.	5
Cc	258.	5
Cryos. consts. A°		
B°		
t_e °C	114.32	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.5340	5
BP	0.0455	4
t_e	0.0363	5
30 mm	0.6365	5
ΔHm cal/g		
ΔHv cal/g 25°C	79.69	5
30 mm	80.24	5
BP	68.81	5
t_e	67.44	5
t_e (d,e)	67.39	5
$\Delta Hv/T_e$	19.53	5
d 15 to 120 °C	83.13	5
e	0.1376	5
d' to °C		
e'		
d_c g/ml	0.247	5
v_c ml/g	4.04	5
t_c °C	269.	5
P_c mm	19096.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9412	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.62	5
30	20.66	5
40	19.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 157

NAME	2-Ethyl-3, 3-dimethyl-1-butene
	2-tert-Butyl-1-butene
Mole % Pur. / Ref.	Molecular Formula C_8H_{16} — Molecular Weight 112.208

STRUCTURAL FORMULA

$CH_3C(CH_3)(CH_3)C(C_2H_5) = CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	110.	2
100	51.56	4
30	25.78	4
10	6.10	5
1	-26.86	5
Pressure mm 25°C	28.82	5
t_e	1032.	5
Density g/ml 20°C	0.728	2
d^t_4 25	0.724	2
30	0.720	4
a	0.744	4
b	-0.038	4
Ref. Index n_D 20°C	1.4159	2
25	1.4135	2
30	1.4111	4
"C"	0.7601	4
MR (Obs.)	38.7	2
MR (Calc.)	38.677	5
(nD-d/2)	1.0519	2
Dielectric		
A 20 to 141 °C	6.94544	5
B	1333.6	5
C	218.	5
A* 20 to 131 °C	1.39179	5
B*	1252.4	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 141 to t_c °C	7.3567	5
Bc	1645.	5
Cc	258.	5
Cryos. consts. A° B°		
t_e °C	121.08	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.6682	5
BP	0.0461	4
t_e	0.0363	5
30 mm	0.6456	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.84	5
30 mm	81.73	5
BP	70.07	5
t_e	68.59	5
t_e (d, e)	68.53	5
ΔHv/T_e	19.52	5
d 20 to 121 °C	85.30	5
e	0.1385	5
d' e' to °C		
d_c g/ml	0.248	5
v_c ml/g	4.035	5
t_c °C	279.	5
P_c mm	19472.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9407	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	22.35	5
30	21.37	5
40	20.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	335.2	5
Exp. L. l. %/wt. u.		
Dispersion	122.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 158

NAME	1-Nonene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{18}	Molecular Weight 126.234	$CH_3(CH_2)_6CH=CH_2$

Property	Value	Ref.
F.P. °C	-81.37	2
F.P. 100%		
B.P. °C 760 mm	146.868	2
100	84.210	2
30	56.55	2
10	35.44	2
1	1.1	5
Pressure mm 25°C	5.339	5
t_e	1132.	5
Density g/ml 20°C	0.72922	2
d_4^t 25	0.72531	2
30	0.72140	4
a	0.74485	4
b	-0.0_3780	4
Ref. Index n_D 20°C	1.41572	2
25	1.41333	2
30	1.41094	4
"C"	0.7585	4
MR (Obs.)	43.415	2
MR (Calc.)	43.295	5
(nD-d/2)	1.05111	2
Dielectric		
A (25 to 173 °C)	6.95387	2
B	1435.4	2
C	205.535	2
A* (25 to 165 °C)	1.42403	5
B*	1352.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (173 to t_c °C)	7.1708	5
Bc	1518.	5
Cc	211.	5
Cryos. consts. A°		
B°		
t_e °C	162.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	3.018	5
BP	0.04944	4
t_e	0.0362	5
30 mm	0.6928	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.83	5
30 mm	82.32	5
BP	69.58	5
t_e	67.48	5
t_e (d, e)	67.36	5
$\Delta Hv/T_e$	19.55	5
d (25 to 170 °C)	90.42	5
e	0.1419	5
d' to		
e' °C		
d_c g/ml	0.25	5
v_c ml/g	4.0	5
t_c °C	321.	5
P_c mm	18000.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9463	5
t_e	0.9338	5
t_c	0.245	5
ΔHc kcal/m	1341.90	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	0.688	2
60	0.568	2
80	0.488	2
100	0.426	2
B^v (30 to 70 °C)	434.21	4
A^v	$\bar{2}.4510$	4
(B^v) (70 to 110 °C)	388.81	4
(A^v)	$\bar{2}.58744$	4
c_p liq. °K		
c_p vap. 300°K	0.38231	2
400	0.48204	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0247	4
n	0.0013	4
o	-0.0_649	4
m' (700 to 1000 °K)	0.1080	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	21.83	5
30	20.91	5
40	20.01	5
Parachor [P] 20°C		
30		
40		
Sugd.	374.2	5
Exp. L.1.%/wt. u.		
Dispersion	114.4	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 159

NAME	1-Decene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{20}$ / Molecular Weight 140.260	$CH_3(CH_2)_7CH=CH_2$

Property	Value	Ref.
F.P. °C	-66.310	2
F.P. 100%		
B.P. °C 760 mm	170.570	2
100	105.198	2
30	76.33	2
10	54.29	2
1	18.2	5
Pressure mm 25°C	1.632	5
t_e	1197.	5
Density g/ml 20°C	0.74081	2
d_4^t 25	0.73693	2
30	0.73305	4
a	0.75632	4
b	-0.0_3775	4
Ref. Index n_D 20°C	1.42146	2
25	1.41913	2
30	1.41675	4
"C"	0.7563	4
MR (Obs.)	48.059	2
MR (Calc.)	47.913	5
(nD-d/2)	1.05106	2
Dielectric		
A 25 to 233 °C	6.96034	2
B	1501.872	2
C	197.58	2
A* 76 to 199 °C	1.45987	5
B*	1417.2	5
K, c, t_k, t_x to °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac 233 to t_c °C	7.8050	5
Bc	2317.	5
Cc	302.	5
Cryos. consts. A° B°		
t_e °C	189.28	5

Property	Value	Ref.
dt/dP °C/mm 25°C	8.778	5
BP	0.05157	2
t_e	0.03615	5
30 mm	0.7231	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.70	5
30 mm	79.78	5
BP	66.84	5
t_e	64.46	5
t_e (d, e)	64.27	5
ΔHv/T_e	19.55	5
d 25 to 189 °C	90.27	5
e	0.1374	5
d', e' to °C		
d_c g/ml	0.243	5
v_c ml/g	4.11	5
t_c °C	343.	5
P_c mm	16209.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9303	5
t_c	0.243	5
ΔHc kcal/m	1488.82	2
ΔHf		
ΔFf		
Viscosity centistokes η 40°C	0.855	2
60	0.692	2
80	0.583	2
100	0.501	2
B^v 30 to 70 °C	479.3	4
A^v	$\bar{2}.40181$	4
(B^v) 70 to 110°C	433.9	4
(A^v)	$\bar{2}.53743$	4
c_p liq. °K		
c_p vap. 300°K	0.38329	2
400	0.48332	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0246	4
n	0.0013	4
o	-0.0_649	4
m' 700 to 1000 °K	0.1096	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	22.68	5
30	21.75	5
40	20.84	5
Parachor [P] 20°C, 30, 40		
Sugd.	413.2	5
Exp. L.1.%/wt. u.		
Dispersion	112.9	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

$T_R = 0.82\ T_C$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 160

NAME	1-Undecene	STRUCTURAL FORMULA
		$CH_3(CH_2)_8CH{=}CH_2$
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{22}$ / Molecular Weight 154.286

		Ref.
F.P. °C	-49.185	2
F.P. 100%		
B.P. °C 760 mm	192.671	2
100	124.851	2
30	94.89	4
10	72.02	5
1	34.54	5
Pressure mm 25°C	0.490	5
t_e	1255.	5
Density g/ml 20°C	0.75032	2
d^t_4 25	0.74655	2
30	0.74278	4
a	0.7654	4
b	-0.0_3754	4
Ref. Index n_D 20°C	1.42609	2
25	1.42383	2
30	1.42167	4
"C"	0.7545	4
MR (Obs.)	52.696	2
MR (Calc.)	52.531	5
(nD-d/2)	1.05093	2
Dielectric		
A (25 to 257 °C)	6.96662	2
B	1562.47	2
C	189.74	2
A* (94 to 225 °C)	1.49542	5
B*	1477.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (257 to t_c °C)	7.9272	5
Bc	2539.	5
Cc	312.	5
Cryos. consts. A°		
B°		
t_e °C	214.20	5

		Ref.
dt/dP °C/mm 25°C	26.16	5
BP	0.05348	2
t_e	0.03615	5
30 mm	0.7506	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.85	5
30 mm	77.50	5
BP	64.33	5
t_e	61.70	5
t_e (d, e)	61.44	5
ΔHv/T_e	19.53	5
d (25 to 215 °C)	90.27	5
e	0.1346	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	364.	5
P_c mm	14948.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9420	5
t_e	0.9253	5
t_c		
ΔHc kcal/m	1635.75	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	1.054	2
60	0.835	2
80	0.691	2
100	0.586	2
B^v (30 to 70 °C)	527.6	4
A^v	$\bar{2}.33787$	4
(B^v) (70 to 110 °C)	471.6	4
(A^v)	$\bar{2}.50397$	4
c_p liq. °K		
c_p vap. 300°K	0.38403	2
400	0.48443	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	0.0233	4
n	600 °K	0.0014	4
o		-0.0_650	4
m'	700 to	0.1143	4
n'	1000 °K	0.0011	4
o'		-0.0_638	4
Surface tension dynes/cm. γ	20°C	23.39	5
	30	22.46	5
	40	21.56	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	452.2	5
Exp. L.1.%/wt.			
u.			
Dispersion		112.1	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.83\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 161

NAME	1-Dodecene		STRUCTURAL FORMULA
			$CH_3(CH_2)_9CH=CH_2$
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{24}$	Molecular Weight 168.312

Property	Value	Ref.
F.P. °C	-35.230	2
F.P. 100%		
B.P. °C 760 mm	213.357	2
100	143.315	2
30	112.35	4
10	88.72	5
1	49.20	5
Pressure mm 25°C	0.1446	5
t_e	1309.	5
Density g/ml 20°C	0.75836	2
d_4^t 25	0.75474	2
30	0.75112	4
a	0.77284	4
b	-0.0_3724	4
Ref. Index n_D 20°C	1.43002	2
25	1.42782	2
30	1.42562	4
"C"	0.7530	4
MR (Obs.)	57.336	2
MR (Calc.)	57.149	5
(nD-d/2)	1.05084	2
Dielectric		
A 112 to	6.97522	2
B 280 °C	1619.86	2
C	182.27	2
A* 112 to	1.52979	5
B* 248 °C	1534.3	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 280 to	8.0711	5
Bc t_c °C	2792.	5
Cc	327.	5
Cryos. consts. A°		
B°		
t_e °C	237.59	5

Property	Value	Ref.
dt/dP °C/mm 25°C	71.96	5
BP	0.05522	2
t_e	0.03609	5
30 mm	0.7757	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.74	5
30 mm	75.41	5
BP	62.15	5
t_e	59.30	5
t_e (d, e)	58.97	5
$\Delta Hv/T_e$	19.54	5
d 25 to	90.16	5
e 238 °C	0.1313	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	384.	5
P_c mm	13911.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9214	5
t_c		
ΔHc kcal/m	1782.68	2
ΔHf		
ΔFf		
Viscosity centistokes η 40°C	1.286	2
60	0.995	2
80	0.811	2
100	0.676	2
B^v to	581.2	4
A^v °C	$\bar{2}.25329$	4
(B^v)	521.0	4
(A^v)	$\bar{2}.43370$	4
c_p liq. °K		
c_p vap. 300°K	0.38464	2
400	0.48529	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0231	4
n 600 °K	0.0014	4
o	-0.0_650	4
m' 700 to	0.1145	4
n' 1000 °K	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	23.99	5
30	23.09	5
40	22.21	5
Parachor [P] 20°C		
30		
40		
Sugd.	491.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	110.7	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.84\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 162

NAME	1-Tridecene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{13}H_{26}$ / Molecular Weight 182.338	$CH_3(CH_2)_{10}CH=CH_2$

Property	Value	Ref.
F.P. °C	-23.070	2
F.P. 100%		
B.P. °C 760 mm	232.78	2
100	160.7	2
30	128.84	4
10	104.5	5
1	63.9	5
Pressure mm 25°C	0.05477	5
t_e	1358.	5
Density g/ml 20°C	0.7653	2
d^t_4 25	0.7617	2
30	0.7581	4
a	0.7797	4
b	-0.0_372	4
Ref. Index n_D 20°C	1.4336	2
25	1.43118	2
30	1.4291	4
"C"	0.7518	4
MR (Obs.)	61.969	2
MR (Calc.)	61.767	5
(nD-d/2)	1.0508	2
Dielectric		
A (128 to 300°C)	6.9692	2
B	1662.68	2
C	173.90	2
A* (128 to 270°C)	1.55088	5
B*	1577.9	5
K		
c		
t_k, t_x (to °C)		
A', B', C' (to °C)		
A'*, B'* (to °C)		
Ac (300 to t_c °C)	8.2020	5
Bc	3037.	5
Cc	341.	5
Cryos. consts. A°, B°		
t_e °C	259.52	5

Property	Value	Ref.
dt/dP °C/mm 25°C	207.11	5
BP	0.05680	2
t_e	0.0361	5
30 mm	0.7980	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.76	5
30 mm	73.58	5
BP	60.05	5
t_e	56.96	5
t_e (d, e)	56.57	5
$\Delta Hv/T_e$	19.50	5
d (25 to 265 °C)	90.36	5
e	0.1302	5
d', e' (to °C)		
d_c g/ml		
v_c ml/g		
t_c °C	401.	5
P_c mm	12776.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9370	5
t_e	0.9165	5
t_c		
ΔHc kcal/m	1929.60	2
ΔHf		
ΔFf		
Viscosity centistokes η 40°C	1.56	2
60	1.184	2
80	0.945	2
100	0.780	2
B^v, A^v (to °C)		
(B^v), (A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38522	2
400	0.48602	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600°K)	0.0233	4
n	0.0014	4
o	-0.0_650	4
m' (700 to 1000°K)	0.1116	4
n'	0.0011	4
o'	-0.0_639	4
Surface tension dynes/cm. γ 20°C	24.52	5
30	23.61	5
40	22.73	5
Parachor [P] 20°C		
30		
40		
Sugd.	530.2	5
Exp. L.1.%/wt. u.		
Dispersion	110.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 163

NAME	1-Tetradecene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{11}CH=CH_2$
Mole % Pur. / Ref.	Molecular Formula $C_{14}H_{28}$	Molecular Weight 196.364

Property	Value	Ref.
F.P. °C	-12.85	2
F.P. 100%		
B.P. °C 760 mm	251.100	2
100	177.1	2
30	144.40	4
10	119.0	5
1	74.5	5
Pressure mm 25°C	0.01815	5
t_e	1406.	5
Density g/ml 20°C	0.7713	2
d_4^t 25	0.7677	2
30	0.7641	4
a	0.7857	4
b	-0.0372	4
Ref. Index n_D 20°C	1.43631	2
25	1.43415	2
30	1.4320	4
"C"	0.7507	4
MR (Obs.)	66.610	2
MR (Calc.)	66.385	5
(nD-d/2)	1.0508	2
Dielectric		
A 144 to	6.9615	2
B 319 °C	1699.76	2
C	165.53	2
A* 144 to	1.56703	5
B* 290 °C	1615.5	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.63041	5
B' 144 °C	2139.5	5
C'	203.3	5
A'* 20 to	2.21444	5
B'* 144 °C	2037.5	5
Ac 319 to	8.3416	5
Bc t_c °C	3298.	5
Cc	356.	5
Cryos. consts. A°		
B°		
t_e °C	280.17	5

Property	Value	Ref.
dt/dP °C/mm 25°C	497.07	5
BP	0.05820	2
t_e	0.0361	5
30 mm	0.8181	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.67	5
30 mm	71.91	5
BP	58.18	5
t_e	54.89	5
t_e (d, e)	54.42	5
ΔHv/T_e	19.48	5
d 25 to	90.50	5
e 290 °C	0.1288	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	416.	5
P_c mm	11740.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9350	5
t_e	0.9129	5
t_c		
ΔHc kcal/m	2067.52	2
ΔHf		
ΔFf		
Viscosity centistokes η 40°C	1.85	2
60	1.40	2
80	1.097	2
100	0.891	2
B_v to		
A_v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38566	2
400	0.48665	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0231	4
n 600 °K	0.0014	4
o	-0.0_650	4
m' 700 to	0.1155	4
n' 1000 °K	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	24.99	5
30	24.07	5
40	23.17	5
Parachor [P] 20°C		
30		
40		
Sugd.	569.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	109.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.86\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 164

NAME	1-Pentadecene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{15}H_{30}$ / Molecular Weight 210.390	$CH_3(CH_2)_{12}CH{=}CH_2$

Property	Value	Ref.
F.P. °C	-3.730	2
F.P. 100%		
B.P. °C 760 mm	268.17	2
100	192.5	2
30	159.1	4
10	133.7	5
1	91.2	5
Pressure mm 25°C	0.00609	5
t_e	1448.0	5
Density g/ml 20°C	0.77641	2
d^t_4 25	0.77290	2
30	0.7694	4
a	0.7904	4
b	$-0.0_3 70$	4
Ref. Index n_D 20°C	1.4389	2
25	1.4368	2
30	1.4347	4
"C"	0.7497	4
MR (Obs.)	71.251	2
MR (Calc.)	71.003	5
(nD-d/2)	1.0506	2
Dielectric		
A (159 to 337°C)	6.9503	2
B	1730.301	2
C	157.	2
A* (159 to 305°C)	1.58000	5
B*	1647.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac (337 to t_c °C)	8.5072	5
Bc	3608.	5
Cc	376.	5
Cryos. consts. A°		
B°		
t_e °C	299.58	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1629.5	5
BP	0.0596	4
t_e	0.0361	5
30 mm	0.8362	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.60	5
30 mm	70.37	5
BP	56.41	5
t_e	52.92	5
t_e (d, e)	52.39	5
$\Delta Hv/T_e$	19.44	5
d (159 to 290°C)	90.75	5
e	0.1280	5
d' (20 to 159°C)	89.62	5
e'	0.1210	5
d_c g/ml		
v_c ml/g		
t_c °C	431.	5
P_c mm	10918.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9325	5
t_e	0.9086	5
t_c		
ΔHc kcal/m	2223.44	2
ΔHf		
ΔFf		
Viscosity centistokes η 40°C	2.21	2
60	1.64	2
80	1.265	2
100	1.016	2
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38609	2
400	0.48719	2
c_v vap.		

Property	Range	Value	Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	0.0232	4
n		0.0014	4
o		$-0.0_6 50$	4
m'	700 to 1000 °K	0.1155	4
n'		0.0011	4
o'		$-0.0_6 38$	4
Surface tension dynes/cm. γ	20°C	25.39	5
	30	24.49	5
	40	23.61	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	608.2	5
Exp. L.1.%/wt. u.			
Dispersion		108.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.87\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 165

NAME	1-Hexadecene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{32}$	Molecular Weight 224.416	$CH_3(CH_2)_{13}CH=CH_2$

		Ref.
F.P. °C	4.120	2
F.P. 100%		
B.P. °C		
760 mm	284.4	2
100	207.2	2
30	173.13	4
10	147.2	5
1	103.9	5
Pressure mm 25°C	0.0$_3$52	5
t_e	1487.	5
Density g/ml 20°C	0.78112	2
d^t_4 25	0.77759	2
30	0.77406	4
a	0.79524	4
b	-0.0$_3$706	4
Ref. Index n_D 20°C	1.44120	2
25	1.43907	2
30	1.43694	4
"C"	0.7489	4
MR (Obs.)	75.898	2
MR (Calc.)	75.621	5
(nD-d/2)	1.05064	2
Dielectric		
A 173 to	6.936	2
B 352 °C	1755.2	2
C	148.	2
A* 173 to	1.59011	5
B* 325 °C	1674.1	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 352 to	8.6611	5
Bc t_c °C	3905.	5
Cc	394.	5
Cryos. consts. A°		
B°		
t_e °C	317.97	5

		Ref.
dt/dP °C/mm		
25°C	4630.	5
BP	0.0610	4
t_e	0.0362	5
30 mm	0.8527	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.45	5
30 mm	68.96	5
BP	54.75	5
t_e	51.07	5
t_e (d, e)	50.46	5
ΔHv/T_e	19.39	5
d 173 to	91.08	5
e 310 °C	0.1277	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	444.	5
P_c mm	10008.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9300	5
t_e	0.9043	5
t_c		
ΔHc kcal/m	2370.37	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 40 °C	2.62	2
60	1.89	2
80	1.46	2
100	1.149	2
B^v 35 to	740.1	5
A^v 70 °C	$\bar{2}$.05527	5
(B^v) 70 to	685.6	5
(A^v) 105 °C	$\bar{2}$.22324	5
c_p liq. °C		
c_p vap. 300°K	0.38643	2
400	0.48767	2
c_v vap.		

		Ref.
f to		
g °C		
h		
f' to		
g' °C		
h'		
m 300 to	0.0231	4
n 600 °K	0.0014	4
o	-0.0$_6$50	4
m' 700 to	0.1158	4
n' 1000 °K	0.0011	4
o'	-0.0$_6$38	4
Surface tension dynes/cm. γ 20°C	25.75	5
30	24.83	5
40	23.94	5
Parachor [P] 20°C		
30		
40		
Sugd.	647.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	107.1	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.87T_c — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 166

NAME	1-Heptadecene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{34}$	Molecular Weight 238.442	$CH_3(CH_2)_{14}CH=CH_2$

		Ref.
F.P. °C	11.2	2
F.P. 100%		
B.P. °C		
760 mm	299.7	2
100	221.0	2
30	186.34	4
10	160.	2
1	116.	5
Pressure mm 25°C	0.0_3708	5
t_e	1522.	5
Density g/ml 20°C	0.7852	2
d^t_4 25	0.7817	2
30	0.7782	4
a	0.7992	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4432	2
25	1.4411	2
30	1.4390	4
"C"	0.7482	4
MR (Obs.)	80.54	2
MR (Calc.)	80.293	5
(nD-d/2)	1.0506	2
Dielectric		
A 186 to 366 °C	6.920	2
B	1774.6	2
C	139.7	2
A* 186 to 340 °C	1.59829	5
B*	1695.7	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 366 to t_c °C	8.8342	5
Bc	4239.	5
Cc	416.	5
Cryos. consts. A°		
B°		
t_e °C	335.11	5

		Ref.
dt/dP °C/mm		
25°C	12449.	5
BP	0.0622	4
t_e	0.0362	5
30 mm	0.8672	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.40	5
30 mm	67.65	5
BP	53.06	5
t_e	49.31	5
t_e (d,e)	48.51	5
ΔHv/T_e	19.33	5
d 186 to 325 °C	91.63	5
e	0.1287	5
d' to °C		5
e'		5
d_c g/ml		
v_c ml/g		
t_c °C	455.	5
P_c mm	9252.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9250	5
t_e	0.8995	5
t_c		
ΔHc kcal/m	2517.30	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 40 °C	3.08	2
60	2.18	2
80	1.66	2
100	1.30	2
B^v 35 to 70 °C	783.1	5
A^v	$\bar{3}.98823$	5
(B^v) 70 to 105 °C	699.7	5
(A^v)	$\bar{2}.23908$	5
c_p liq. °K		
c_p vap. 300°K	0.38672	2
400	‾0.48809	2
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0229	4
n	0.0014	4
o	-0.0_650	4
m' 700 to 1000 °K	0.1160	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	26.07	5
30	25.16	5
40	24.26	5
Parachor [P] 20°C		
30		
40		
Sugd.	686.2	5
Exp. L.l.%/wt. u.		
Dispersion	107.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.88\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 167

NAME	1-Octadecene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{18}H_{36}$ / Molecular Weight 252.468	$CH_3(CH_2)_{15}CH=CH_2$

Property	Value	Ref.
F.P. °C	17.6	2
F.P. 100%		
B.P. °C 760 mm	314.2	2
100	234.2	2
30	198.91	4
10	172.	2
1	128.	5
Pressure mm 93.77 °C	0.1000	5
t_e	1575.	5
Density g/ml 20°C	0.7888	2
d^t_4 25	0.7853	2
30	0.7818	4
a	0.8028	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4449	2
25	1.4428	2
30	1.4408	4
"C"	0.7476	4
MR (Obs.)	85.185	2
MR (Calc.)	84.851	5
(nD-d/2)	1.0506	2
Dielectric		
A 199 to 380 °C	6.901	2
B	1789.4	2
C	131.	2
A* 199 to 361 °C	1.58563	5
B*	1707.4	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 380 to t_c °C	9.04000	5
Bc	4643.	5
Cc	443.1	5
Cryos. consts. A°		
B°		
t_e °C	352.14	5

Property	Value	Ref.
dt/dP °C/mm BP	0.0633	4
t_e	0.03596	5
30 mm	0.8805	5
ΔHm cal/g		
ΔHv cal/g 25°C		
30 mm	66.44	5
BP	52.04	5
t_e	48.18	5
t_e (d, e)	47.31	5
$\Delta Hv/T_e$	19.45	5
d 199 to 360 °C	91.20	5
e	0.1246	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	466.	5
P_c mm	8609.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9303	5
t_e	0.9053	5
t_c		
ΔHc kcal/m	2664.22	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	3.59	2
60	2.51	2
80	1.87	2
100	1.46	2
B^v 35 to 70 °C	810.4	5
A^v	$\bar{3}.96761$	5
(B^v) 70 to 105 °C	560.8	5
(A^v)	$\bar{2}.69007$	5
c_p liq. °K		
c_p vap. 300°K	0.38702	2
400	0.48846	2
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0230	4
n	0.0014	4
o	-0.0_650	4
m' 700 to 1000 °K	0.1164	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	26.36	5
30	25.43	5
40	24.53	5
Parachor [P] 20°C		
30		
40		
Sugd.	725.2	5
Exp. L. 1. %/wt. u.		
Dispersion	107.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.88\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 168

NAME	1-Nonadecene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{16}CH=CH_2$

Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{38}$	Molecular Weight 266.494

Property	Value	Ref.
F.P. °C	23.4	2
F.P. 100%		
B.P. °C 760 mm	328.0	2
100	247.	2
30	211.15	4
10	184.	2
1	138.8	5
Pressure mm 106.43°C	0.1000	5
t_e	1606.06	5
Density g/ml 20°C	0.7920≠	2
d^t_4 25	0.7886	2
30	0.7852	4
a	0.8056	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4465≠	2
25	1.4445	2
30	1.4424	4
"C"	0.7471	4
MR (Obs.)	89.83≠	2
MR (Calc.)	89.475	5
(nD-d/2)	1.0506≠	2
Dielectric		
A 211 to	6.881	2
B 394 °C	1800.3	2
C	122.	2
A* 211 to	1.58837	5
B* 377 °C	1720.93	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 394 to	9.29778	5
Bc t_c °C	5158.13	5
Cc	479.41	5
Cryos. A°		
consts. B°		
t_e °C	367.84	5

Property	Value	Ref.
dt/dP °C/mm 106.43 °C	125.89	5
BP	0.06429	2
t_e	0.03604	5
30 mm	0.8925	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.30	5
30 mm	65.33	5
BP	50.79	5
t_e	46.63	5
t_e (d, e)	45.83	5
$\Delta Hv/T_e$	19.38	5
d 211 to	91.62	5
e 367 °C	0.1245	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	477.	5
P_c mm	8079.4	5
PV/RT 106.43 °C	1.0000	5
30 mm	1.0000	5
BP	0.9300	5
t_e	0.9005	5
t_c		
ΔHc kcal/m	2811.14	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	4.17	2
60	2.87	2
80	2.12	2
100	1.63	2
B^v 35 to	846.6	4
A^v 70 °C	$\bar{3}$.91708	4
(B^v) 70 to	752.3	4
(A^v) 105 °C	$\bar{2}$.19638	4
c_p liq. °K		
c_p vap. 300°K	0.38725	2
400	0.48879	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to	0.0230	4
n 600 °K	0.0014	4
o	-0.0_650	4
m' 700 to	0.1187	4
n' 1000 °K	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	26.60	5
30	25.70	5
40	24.83	5
Parachor [P] 20°C		
30		
40		
Sugd.	764.2	5
Exp. L.I.%/wt.		
u.		
Dispersion	106.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.89 T_c ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 169

NAME	1-Eicosene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{40}$
Molecular Weight 280.520		$CH_3(CH_2)_{17}CH=CH_2$

Property	Value	Ref.
F.P. °C	28.6	2
F.P. 100%		
B.P. °C 760 mm	341.2	2
100	259.	2
30	222.92	4
10	195.	2
1	149.	5
Pressure mm 117.0°C	0.1000	5
t_e	1622.	5
Density g/ml 20°C d^t_4	0.7950≠	2
25	0.7916≠	2
30	0.7882≠	4
a	0.8086	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4480≠	2
25	1.4459≠	2
30	1.4439≠	4
"C"	0.7466	4
MR (Obs.)	94.47≠	2
MR (Calc.)	94.093	5
(nD-d/2)	1.0506≠	2
Dielectric		
A 223 to 405 °C	6.859	2
B	1807.9	2
C	113.	2
A* 223 to 393 °C	1.59840	5
B*	1734.6	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 405 to t_c °C	9.50720	5
Bc	5591.	5
Cc	505.	5
Cryos. consts. A°		
B°		
t_e °C	382.48	5

Property	Value	Ref.
dt/dP °C/mm 117.0°C	127.12	5
BP	0.06527	4
t_e	0.03634	5
30 mm	0.9036	5
ΔHm cal/g		
ΔHv cal/g 25°C	86.27	5
30 mm	64.32	5
BP	49.34	5
t_e	44.87	5
t_e (d, e)	44.12	5
ΔHv/T_e	19.19	5
d 223 to 383 °C	92.55	5
e	0.1266	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	486.	5
P_c mm	7425.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9250	5
t_e	0.8894	5
t_c		
ΔHc kcal/m	2958.06	2
ΔHf		
ΔFf		
Viscosity centistokes η 40 °C	4.81	2
60	3.27	2
80	2.38	2
100	1.81	2
B^v 35 to 70 °C	874.5	5
A^v	$\bar{3}$.89001	5
(B^v) 70 to 105 °C	783.6	5
(A^v)	$\bar{2}$.15801	5
c_p liq. °K		
c_p vap. 300°K	0.38749	2
400	0.48909	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0230	4
n	0.0014	4
o	-0.0_650	4
m' 700 to 1000 °K	0.1166	4
n'	0.0011	4
o'	-0.0_638	4
Surface tension dynes/cm. γ 20°C	26.85	5
30	25.94	5
40	25.06	5
Parachor [P] 20°C		
30		
40		
Sugd.	803.2	5
Exp. L.1.%/wt. u.		
Dispersion	106.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.89T_c$ ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 170

NAME	1-Heneicosene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{18}CH=CH_2$
Mole % Pur. / Ref.	Molecular Formula $C_{21}H_{42}$	Molecular Weight 294.546

Property	Value	Ref.
F.P. °C	33.3	2
F.P. 100%		
B.P. °C 760 mm	355.	2
100	271.27	5
30	233.06	5
10	203.53	5
1	153.75	5
0.1	115.62	5
Press. mm t_e	1602.	5
Density g/ml 20°C	0.7977≠	2
d^t_4 25	0.7943≠	2
30	0.7909≠	4
a	0.8113	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4494≠	2
25	1.4473≠	2
30	1.4452≠	4
"C"	0.7461	4
MR (Obs.)	99.09	4
MR (Calc.)	98.711	5
(nD-d/2)	1.0505≠	2
Dielectric	2.10	5
A 233 to 443 °C	7.54372	4
B	2457.3	4
C	172.	5
A* 233 to 403 °C	2.31717	5
B*	2377.8	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 115 to	2.23287	5
B'* 233 °C	2343.6	5
Ac, Bc, Cc t_c °C		
Cryos. consts. A° B°		
t_e °C	394.33	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	146.20	5
BP	0.0646	4
t_e	0.0354	5
30 mm	0.9666	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	69.75	5
30 mm	59.60	5
BP	47.98	5
t_e	44.61	5
t_e (d, e)	44.22	5
ΔHv/T_e	19.39	5
d 233 to 393 °C	81.80	5
e	0.0953	5
d' 115 to 233 °C	79.74	5
e'	0.0864	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8948	5
t_e	0.8627	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.06	5
30	26.15	5
40	25.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	842.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	105.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 171

NAME	1-Docosene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3(CH_2)_{19}CH=CH_2$
Molecular Formula	$C_{22}H_{44}$	
Molecular Weight	308.572	

Property	Value	Ref.
F.P. °C	37.8	2
F.P. 100%		
B.P. °C 760 mm	367.	2
100	281.87	5
30	243.02	5
10	212.98	5
1	162.33	5
0.1	123.52	5
Press. mm t_e	1632.3	5
Density g/ml 20°C	0.8002≠	2
d_4^t 25	0.7967≠	2
30	0.7934≠	4
a	0.8138	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4505≠	2
25	1.4485≠	2
30	1.4464≠	4
"C"	0.7457	4
MR (Obs.)	103.73	2
MR (Calc.)	103.329	5
(nD-d/2)	1.0505≠	2
Dielectric	2.10	5
A 243 to 458 °C	7.55128	4
B	2505.7	4
C	169.5	5
A* 243 to 418 °C	2.33832	5
B*	2425.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 122 to 243 °C	2.25251	5
B'*	2390.03	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	408.05	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	148.82	5
BP	0.0656	4
t_e	0.0354	5
30 mm	0.9831	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	68.09	5
30 mm	58.15	5
BP	47.39	5
t_e	43.34	5
t_e (d, e)	43.0	5
ΔHv/T_e	19.63	5
d 243 to 408 °C	80.49	5
e	0.0919	5
d' 122 to 243 °C	78.37	5
e'	0.0832	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8943	5
t_e	0.8612	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.27	5
30	26.35	5
40	25.46	5
Parachor [P] 20°C		
30		
40		
Sugd.	881.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	105.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 172

NAME	1-Tricosene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{23}H_{46}$	Molecular Weight 322.598
			$CH_3(CH_2)_{20}CH{=}CH_2$

Property	Value	Ref.
F.P. °C	41.6	2
F.P. 100%		
B.P. °C 760 mm	379.	2
100	292.47	5
30	252.95	5
10	222.39	5
1	170.83	5
0.1	131.32	5
Press. mm t_e	1662.0	5
Density g/ml 20°C	0.8023≠	2
d_4^t 25	0.7990≠	2
30	0.7958≠	4
a	0.8156	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4516≠	2
25	1.4496≠	2
30	1.4475≠	4
"C"	0.7453	4
MR (Obs.)	108.39	2
MR (Calc.)	107.947	5
(nD-d/2)	1.0505≠	2
Dielectric	2.11	5
A (254 to 469 °C)	7.56305	4
B	2558.84	4
C	167.5	5
A* (254 to 429 °C)	2.36314	5
B*	2477.9	5
K		
c		
t_k to t_x °C		
A' to		
B' °C		
C'		
A'* 132 to 254 °C	2.27521	5
B'*	2440.9	5
Ac (t_c to °C)		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	421.77	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	151.55	5
BP	0.0667	4
t_e	0.0355	5
30 mm	1.0001	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	66.50	5
30 mm	56.80	5
BP	45.63	5
t_e	42.20	5
t_e (d, e)	41.85	5
ΔHv/T_e	19.59	5
d (254 to 419 °C)	79.22	5
e	0.0886	5
d' (132 to 254 °C)	76.96	5
e'	0.0797	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8936	5
t_e	0.8596	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.44	5
30	26.55	5
40	25.68	5
Parachor [P] 20°C		
30		
40		
Sugd.	920.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	105.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 173

NAME	1-Tetracosene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{24}H_{48}$	Molecular Weight 336.624	$CH_3(CH_2)_{21}CH=CH_2$

		Ref.
F.P. °C	45.3	2
F.P. 100%		
B.P. °C 760 mm	390.	2
100	302.20	5
30	262.09	5
10	231.06	5
1	178.73	5
0.1	138.61	5
Press. mm t_e	1690.	5
Density g/ml 20°C	0.8045≠	2
d_4^t 25	0.8011≠	2
30	0.7977≠	4
a	0.8181	4
b	-0.0$_3$68	4
Ref. Index n_D 20°C	1.4527≠	2
25	1.4506≠	2
30	1.4485≠	4
"C"	0.7449	4
MR (Obs.)	113.03	2
MR (Calc.)	112.565	5
(nD-d/2)	1.0505≠	2
Dielectric	2.11	5
A 263 to	7.56767	4
B 481 °C	2601.2	4
C	165.	5
A* 263 to	2.38017	5
B* 441 °C	2519.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 140 to	2.29129	5
B'* 263 °C	2481.6	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	434.4	5

		Ref.
dt/dP °C/mm 0.1 mm	153.90	5
BP	0.0677	4
t_e	0.0355	5
30 mm	1.0151	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	65.04	5
30 mm	55.51	5
BP	44.52	5
t_e	41.05	5
t_e (d, e)	40.70	5
$\Delta Hv/T_e$	19.69	5
d 263 to	78.01	5
e 431 °C	0.0859	5
d' 140 to	75.73	5
e' 263 °C	0.0772	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8933	5
t_e	0.8585	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	27.62	5
γ 30	26.69	5
40	25.80	5
Parachor [P] 20°C		
30		
40		
Sugd.	959.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	104.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 174

NAME	1-Pentacosene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{22}CH=CH_2$

Mole % Pur.	Ref.	Molecular Formula $C_{25}H_{50}$	Molecular Weight 350.650

Property	Value	Ref.
F.P. °C	48.7	2
F.P. 100%		
B.P. °C 760 mm	401.	2
100	311.91	5
30	271.18	5
10	239.66	5
1	186.48	5
0.1	145.70	5
Press. mm t_e	1717.3	5
Density g/ml 20°C	0.8063≠	2
d_4^t 25	0.8030≠	2
30	0.7998≠	4
a	0.8196	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4536≠	2
25	1.4515≠	2
30	1.4495≠	4
"C"	0.7447	4
MR (Obs.)	117.68	2
MR (Calc.)	117.183	5
(nD-d/2)	1.0505≠	2
Dielectric	2.11	5
A 272 to	7.58080	4
B 493 °C	2653.1	4
C	163.5	5
A* 272 to	2.40531	5
B* 453 °C	2570.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 147 to	2.31448	5
B'* 272 °C	2531.2	5
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	446.99	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	156.49	5
BP	0.0686	4
t_e	0.0355	5
30 mm	1.0309	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	63.53	5
30 mm	54.27	5
BP	43.51	5
t_e	40.02	5
t_e (d, e)	39.69	5
$\Delta Hv/T_e$	19.48	5
d 272 to	76.74	5
e 443 °C	0.0829	5
d' 147 to	74.29	5
e' 272 °C	0.0738	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8927	5
t_e	0.8571	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	27.77	5
30	26.87	5
40	26.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	998.2	5
Exp. L.l.%/wt.		
u.		
Dispersion	104.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 175

NAME	1-Hexacosene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{26}H_{52}$ / Molecular Weight 364.676	$CH_3(CH_2)_{23}CH=CH_2$

Property	Value	Ref.
F.P. °C	51.8	2
F.P. 100%		
B.P. °C 760 mm	411.	2
100	320.74	5
30	279.47	5
10	247.53	5
1	193.62	5
0.1	152.26	5
Press. mm t_e	1742.7	5
Density g/ml 20°C	0.8082≠	2
d_4^t 25	0.8048≠	2
30	0.8014≠	4
a	0.8218	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4545≠	2
25	1.4524≠	2
30	1.4503≠	4
"C"	0.7443	4
MR (Obs.)	122.31	2
MR (Calc.)	122.101	5
(nD-d/2)	1.0504≠	2
Dielectric		
A 280 to 504 °C	7.58699	4
B	2694.3	4
C	161.5	5
A* 280 to 464 °C	2.42316	5
B*	2611.2	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 154 to 280 °C	2.33132	5
B'*	2570.7	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	458.48	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	158.69	5
BP	0.0695	4
t_e	0.0356	5
30 mm	1.0448	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	62.15	5
30 mm	53.07	5
BP	42.50	5
t_e	38.98	5
t_e (d, e)	38.66	5
ΔHv/T_e	19.43	5
d 280 to 454 °C	75.52	5
e	0.0804	5
d' 154 to 280 °C	73.02	5
e'	0.0714	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8924	5
t_e	0.8561	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	27.92	5
30	26.99	5
40	26.09	5
Parachor [P] 20°C		
30		
40		
Sugd.	1037.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	104.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 176

NAME	1-Heptacosene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{27}H_{54}$ / Molecular Weight 378.702	$CH_3(CH_2)_{24}CH=CH_2$

Property	Value	Ref.
F.P. °C	54.7	2
F.P. 100%		
B.P. °C 760 mm	421.	2
100	329.58	5
30	287.77	5
10	255.40	5
1	200.76	5
0.1	158.83	5
Press. mm t_e	1767.5	5
Density g/ml 20°C	0.8097≠	2
d_4^t 25	0.8064≠	2
30	0.8032≠	4
a	0.8230	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4552≠	2
25	1.4532≠	2
30	1.4513≠	4
"C"	0.7441	4
MR (Obs.)	126.95	2
MR (Calc.)	126.219	5
(nD-d/2)	1.0504≠	2
Dielectric	2.12	5
A 289 to 515 °C	7.59302	4
B	2735.4	4
C	159.5	5
A* 289 to 475 °C	2.44072	5
B*	2651.9	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* 161 to 289 °C	2.34745	5
B'*	2610.2	5
Ac, Bc, Cc t_c to °C		
Cryos. consts. A°, B°		
t_e °C	469.86	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	160.89	5
BP	0.0704	4
t_e	0.0356	5
30 mm	1.0587	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	60.86	5
30 mm	51.96	5
BP	41.57	5
t_e	38.04	5
t_e (d, e)	37.74	5
ΔHv/T_e	19.11	5
d 289 to 465 °C	74.39	5
e	0.0780	5
d' 161 to 289 °C	71.84	5
e'	0.0691	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8919	5
t_e	0.8549	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.05	5
30	27.14	5
40	26.26	5
Parachor [P] 20°C		
30		
40		
Sugd.	1076.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	104.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 177

NAME	1-Octacosene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{25}CH=CH_2$
Mole % Pur.	Ref.	Molecular Formula $C_{28}H_{56}$	Molecular Weight 392.728

Property	Value	Ref.
F.P. °C	57.5	2
F.P. 100%		
B.P. °C 760 mm	430.	2
100	337.52	5
30	295.19	5
10	262.42	5
1	207.07	5
0.1	164.59	
Press. mm t_e	1789.2	5
Density g/ml 20°C	0.8114≠	2
d^t_4 25	0.8080≠	2
30	0.8046≠	4
a	0.8250	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4560≠	2
25	1.4540≠	2
30	1.4519≠	4
"C"	0.7438	4
MR (Obs.)	131.57	2
MR (Calc.)	131.337	5
(nD-d/2)	1.0504≠	2
Dielectric	2.12	5
A 297 to	7.60499	4
B 525 °C	2780.18	4
C	158.5	5
A* 297 to	2.46441	5
B* 485 °C	2696.18	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 168 to	2.36904	5
B'* 297 °C	2652.91	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	480.28	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	163.06	5
BP	0.0712	2
t_e	0.0356	5
30 mm	1.0718	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	59.46	5
30 mm	50.81	5
BP	40.61	5
t_e	37.06	5
t_e (d, e)	36.82	5
$\Delta Hv/T_e$	19.32	5
d 297 to	73.13	5
e 475 °C	0.0756	5
d' 168 to	70.37	5
e' 297 °C	0.0663	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8912	5
t_e	0.8535	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	28.18	5
30	27.25	5
40	26.34	5
Parachor [P] 20°C		
30		
40		
Sugd.	1115.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 178

NAME	1-Nonacosene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{29}H_{58}$; Molecular Weight 406.754	$CH_3(CH_2)_{26}CH=CH_2$

Property	Value	Ref.
F.P. °C	60.0	2
F.P. 100%		
B.P. °C 760 mm	440.	2
100	346.37	5
30	303.51	5
10	270.33	5
1	214.28	5
0.1	171.26	5
Press. mm t_e	1814.7	5
Density g/ml 20°C	0.8127≠	2
d_4^t 25	0.8094≠	2
30	0.8062≠	4
a	0.8260	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4567≠	2
25	1.4547≠	2
30	1.4526≠	4
"C"	0.7436	4
MR (Obs.)	136.23	2
MR (Calc.)	135.955	5
(nD-d/2)	1.0504≠	2
Dielectric	2.12	5
A 305 to 535 °C	7.60654	4
B	2816.5	4
C	156.	5
A* 305 to 495 °C	2.47604	5
B*	2732.0	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* 174 to 305 °C	2.38008	5
B'*	2687.9	5
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	491.82	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	165.14	5
BP	0.0721	4
t_e	0.0357	5
30 mm	1.0853	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	58.43	5
30 mm	49.87	5
BP	39.82	5
t_e	36.26	5
t_e (d, e)	36.0	5
ΔHv/T_e	19.28	5
d 305 to 485 °C	72.22	5
e	0.0736	5
d' 174 to 305 °C	69.51	5
e'	0.0647	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8526	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.30	5
30	27.39	5
40	26.50	5
Parachor [P] 20°C		
30		
40		
Sugd.	1154.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 179

NAME	1-Triacontene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{30}H_{60}$ — Molecular Weight 420.780 — $CH_3(CH_2)_{27}CH{=}CH_2$

Property	Value	Ref.
F.P. °C	62.4	2
F.P. 100%		
B.P. °C 760 mm	448.	2
100	353.43	5
30	310.14	5
10	276.61	5
1	219.97	5
0.1	176.49	5
Press. mm t_e	1834.4	5
Density g/ml 20°C	0.8141≠	2
d_4^t 25	0.8107≠	2
30	0.8075≠	4
a	0.8273	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4573≠	2
25	1.4553≠	2
30	1.4534≠	
"C"	0.7433	4
MR (Obs.)	140.85	2
MR (Calc.)	140.373	5
(nD-d/2)	1.0503≠	2
Dielectric	2.12	5
A 313 to	7.61184	4
B 545 °C	2850.4	4
C	154.5	5
A* 313 to	2.49231	5
B* 505 °C	2765.5	5
K		
c		
t_k to / t_x °C		
A' to / B' °C / C'		
A'* 180 to	2.39519	5
B'* 313 °C	2720.4	5
Ac to / Bc t_c °C / Cc		
Cryos. A° consts. B°		
t_e °C	501.03	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	166.92	5
BP	0.0728	4
t_e	0.0357	5
30 mm	1.0964	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	57.20	5
30 mm	48.82	5
BP	38.95	5
t_e	35.37	5
t_e (d, e)	35.17	5
ΔHv/T_e	19.22	5
d 313 to	71.04	5
e 495 °C	0.0716	5
d' 180 to	68.27	5
e' 313 °C	0.0627	5
d_c g/ml, v_c ml/g, t_c °C, P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8906	5
t_e	0.8517	5
t_c		
ΔHc kcal/m, ΔHf, ΔFf		
Viscosity centistokes η °C		
B^v to / A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.40	5
30	27.49	5
40	26.60	5
Parachor [P] 20°C, 30, 40		
Sugd.	1193.2	5
Exp. L. l. %/wt. u.		
Dispersion	103.≠	2
Flash Point °C, Fire Point		
M. Spec., Ultra V., X-Ray Dif., Infrared		
Solubility in⁺ Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

≠ for undercooled liquid — ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 180

NAME	1-Hentriacontene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{31}H_{62}$ / Molecular Weight 434.806	$CH_3(CH_2)_{28}CH=CH_2$

Property	Value	Ref.
F.P. °C	64.6	2
F.P. 100%		
B.P. °C 760 mm	457.	2
100	361.38	5
30	317.59	5
10	283.67	5
1	226.36	5
0.1	182.35	5
Press. mm t_e	1857.6	5
Density g/ml 20°C	0.8153≠	2
d^t_4 25	0.8120≠	2
30	0.8088≠	4
a	0.8286	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4580≠	2
25	1.4560≠	2
30	1.4540≠	4
"C"	0.7431	4
MR (Obs.)	145.52	2
MR (Calc.)	144.991	5
(nD-d/2)	1.0503≠	2
Dielectric	2.12	5
A 320 to	7.61918	4
B 554 °C	2890.4	4
C	153.	5
A* 320 to	2.50893	5
B* 514 °C	2804.6	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 187 to	2.41119	5
B'* 320 °C	2758.7	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	511.43	5

Property	Value	Ref.
dt/dP °C/mm		
0.1 mm	168.97	5
BP	0.0736	4
t_e	0.0357	5
30 mm	1.1092	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	56.12	5
30 mm	47.91	5
BP	38.20	5
t_e	34.61	5
t_e (d, e)	34.43	5
ΔHv/T_e	19.17	5
d 320 to	70.02	5
e 504 °C	0.0696	5
d' 185 to	67.19	5
e' 320 °C	0.0607	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8905	5
t_e	0.8510	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.51	5
30	27.60	5
40	26.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	1232.2	5
Exp. L.I.%/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II; Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No.181

NAME	1-Dotriacontene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{32}H_{64}$	Molecular Weight 448.832
			$CH_3(CH_2)_{29}CH=CH_2$

Property	Value	Ref.
F.P. °C	66.7	2
F.P. 100%		
B.P. °C 760 mm	465.	2
100	368.45	5
30	324.22	5
10	289.96	5
1	232.06	5
0.1	187.58	5
Press. mm t_e	1879.8	5
Density g/ml 20°C	0.8165≠	2
d_4^t 25	0.8132≠	2
30	0.8100≠	4
a	0.8298	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4585≠	2
25	1.4565≠	2
30	1.4546≠	4
"C"	0.7429	4
MR (Obs.)	150.13	2
MR (Calc.)	149.609	5
(nD-d/2)	1.0503≠	2
Dielectric	2.13	5
A 327 to 563 °C	7.62424	4
B	2924.3	4
C	151.5	5
A* 327 to 523 °C	2.52222	5
B*	2837.3	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 192 to	2.42526	5
B'* 327 °C	2791.2	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	520.74	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	170.75	5
BP	0.0743	4
t_e	0.0357	5
30 mm	1.1203	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	55.04	5
30 mm	46.98	5
BP	37.47	5
t_e	33.87	5
t_e (d, e)	33.70	5
ΔHv/T_e	19.14	5
d 327 to 513 °C	68.90	5
e	0.0676	5
d' 192 to 327 °C	66.11	5
e'	0.0590	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8511	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.61	5
30	27.70	5
40	26.81	5
Parachor [P] 20°C		
30		
40		
Sugd.	1271.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 182

NAME	1-Tritriacontene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{30}CH=CH_2$

Mole % Pur.	Ref.	Molecular Formula $C_{33}H_{66}$	Molecular Weight 462.858

		Ref.
F.P. °C	68.7	2
F.P. 100%		
B.P. °C 760 mm	473.	2
100	375.52	5
30	330.85	5
10	296.24	5
1	237.75	5
0.1	192.82	5
Press. mm t_e	1906.4	5
Density g/ml 20°C	0.8176≠	2
d_4^t 25	0.8143≠	2
30	0.8111≠	4
a	0.8309	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4591≠	2
25	1.4571≠	2
30	1.4550≠	4
"C"	0.7428	4
MR (Obs.)	154.79	2
MR (Calc.)	154.227	5
(nD-d/2)	1.0503≠	2
Dielectric	2.13	5
A 334 to 572 °C	7.62921	4
B	2958.3	4
C	150.	5
A* 334 to 532 °C	2.53183	5
B*	2868.4	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 198 to	2.43886	5
B'* 334 °C	2823.7	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	530.21	5

		Ref.
dt/dP °C/mm 0.1 mm	172.53	5
BP	0.0750	2
t_e	0.0356	5
30 mm	1.1315	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	54.03	5
30 mm	46.12	5
BP	36.84	5
t_e	33.23	5
t_e (d, e)	33.1	5
$\Delta Hv/T_e$	20.49	5
d 334 to	67.70	5
e 522 °C	0.0653	5
d' 198 to	65.09	5
e' 334 °C	0.0573	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8930	5
t_e	0.8529	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. 20°C	28.69	5
γ 30	27.77	5
40	26.88	5
Parachor [P] 20°C		
30		
40		
Sugd.	1310.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 183

NAME	1-Tetratriacontene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{34}H_{68}$	Molecular Weight 476.884	$CH_3(CH_2)_{31}CH=CH_2$

Property	Value	Ref.
F.P. °C	70.5	2
F.P. 100%		
B.P. °C 760 mm	481.	2
100	382.59	5
30	337.48	5
10	302.53	5
1	243.45	5
0.1	198.06	5
Press. mm t_e	1917.3	5
Density g/ml 20°C	0.8186≠	2
d_4^t 25	0.8153≠	2
30	0.8121≠	4
a	0.8319	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4596≠	2
25	1.4576≠	2
30	1.4556≠	4
"C"	0.7425	4
MR (Obs.)	159.44	2
MR (Calc.)	158.845	5
(nD-d/2)	1.0503≠	2
Dielectric	2.13	5
A 341 to	7.63409	4
B 581 °C	2992.2	4
C	148.5	5
A* 341 to	2552.8	5
B* 541 °C	2905.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* 204 to	2.45201	5
B'* 341 °C	2856.2	5
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	539.14	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	174.32	5
BP	0.0757	4
t_e	0.0358	5
30 mm	1.1427	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	53.08	5
30 mm	45.30	5
BP	36.03	5
t_e	32.40	5
t_e (d, e)	32.29	5
ΔHv/T_e	19.02	5
d 341 to	67.11	5
e 531 °C	0.0646	5
d' 204 to	64.13	5
e' 341 °C	0.0558	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8895	5
t_e	0.8484	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	28.78	5
30	27.87	5
40	26.97	5
Parachor [P] 20°C		
30		
40		
Sugd.	1349.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 184

NAME	1-Pentatriacontene		
Mole % Pur.	Ref.	Molecular Formula $C_{35}H_{70}$	Molecular Weight 490.910

STRUCTURAL FORMULA

$CH_3(CH_2)_{32}CH=CH_2$

Property	Value	Ref.
F.P. °C	72.3	2
F.P. 100%		
B.P. °C 760 mm	489.	2
100	389.65	5
30	344.11	5
10	308.82	5
1	249.15	5
0.1	203.29	5
Press. mm t_e	1937.2	5
Density g/ml 20°C	0.8196≠	2
d_4^t 25	0.8163≠	2
30	0.8131≠	4
a	0.8329	4
b	$-0.0_3 66$	4
Ref. Index n_D 20°C	1.4601≠	2
25	1.4581≠	2
30	1.4560≠	4
"C"	0.7425	4
MR (Obs.)	164.08	2
MR (Calc.)	163.463	5
(nD-d/2)	1.0503≠	2
Dielectric	2.13	5
A 347 to 589 °C	7.63888	4
B	3026.1	4
C	147.	5
A* 347 to 549 °C	2.56641	5
B*	2938.7	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 209 to 347 °C	2.46475	5
B'*	2888.7	5
Ac to °C		
Bc t_c		
Cc		
Cryos. consts. A°		
B°		
t_e °C	548.39	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	176.10	5
BP	0.0764	4
t_e	0.0358	5
30 mm	1.1538	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	52.18	5
30 mm	44.53	5
BP	35.38	5
t_e	31.74	5
t_e (d, e)	31.65	5
ΔHv/T_e	18.89	5
d 347 to 539 °C	66.25	5
e	0.0631	5
d' 209 to 347 °C	63.22	5
e'	0.0543	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8892	5
t_e	0.8475	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.87	5
30	27.95	5
40	27.05	5
Parachor [P] 20°C		
30		
40		
Sugd.	1388.2	5
Exp. L.1.%/wt. u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 185

NAME	1-Hexatriacontene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{36}H_{72}$
Molecular Weight 504.936		$CH_3(CH_2)_{33}CH=CH_2$

Property	Value	Ref.
F.P. °C	73.9	2
F.P. 100%		
B.P. °C 760 mm	496.	2
100	395.83	5
30	349.90	5
10	314.30	5
1	227.27	5
0.1	207.81	5
Press. mm t_e	1957.8	5
Density g/ml 20°C	0.8205≠	2
d_4^t 25	0.8172≠	2
30	0.8140≠	4
a	0.8337	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4605≠	2
25	1.4585≠	2
30	1.4566≠	4
"C"	0.7423	4
MR (Obs.)	168.71	2
MR (Calc.)	168.081	5
(nD-d/2)	1.0503≠	2
Dielectric	2.13	5
A 353 to 596 °C	7.64540	4
B	3058.9	4
C	146.	5
A* 353 to 556 °C	2.57957	5
B*	2969.8	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 214 to	2.47928	5
B'* 353 °C	2920.1	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	556.60	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	177.73	5
BP	0.077	2
t_e	0.0358	5
30 mm	1.1638	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	51.22	5
30 mm	43.73	5
BP	34.77	5
t_e	31.12	5
t_e (d, e)	31.06	5
ΔHv/T_e	20.46	5
d 353 to 546 °C	65.18	5
e	0.0613	5
d' 214 to 353 °C	62.18	5
e'	0.0527	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8900	5
t_e	0.8480	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.93	5
30	28.01	5
40	27.11	5
Parachor [P] 20°C		
30		
40		
Sugd.	1427.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 186

NAME	1-Heptatriacontene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH_3(CH_2)_{34}CH=CH_2$
Molecular Formula $C_{37}H_{74}$	Molecular Weight 518.962	

		Ref.
F.P. °C	75.5	2
F.P. 100%		
B.P. °C 760 mm	503.	2
100	402.03	5
30	355.74	5
10	319.85	5
1	259.17	5
0.1	212.53	5
Press. mm t_e	1972.4	5
Density g/ml 20°C	0.8214≠	2
d_4^t 25	0.8181≠	2
30	0.8149≠	4
a	0.8347	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4610≠	2
25	1.4590≠	2
30	1.4570≠	4
"C"	0.7421	4
MR (Obs.)	173.37	2
MR (Calc.)	172.699	5
(nD-d/2)	1.0502≠	2
Dielectric	2.13	5
A 359 to 604 °C	7.64418	4
B	3081.9	4
C	144.	5
A* 359 to 564 °C	2.58930	5
B*	2993.7	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 219 to 359 °C	2.48644	5
B'*	2942.3	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	564.62	5

		Ref.
dt/dP °C/mm 0.1 mm	179.12	5
BP	0.0776	4
t_e	0.0359	5
30 mm	1.1731	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	50.43	5
30 mm	43.01	5
BP	34.11	5
t_e	30.45	5
t_e (d, e)	30.4	5
ΔHv/T_e	20.46	5
d 359 to 554 °C	64.49	5
e	0.0604	5
d' 219 to 359 °C	61.44	5
e'	0.0518	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8888	5
t_e	0.8462	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.02	5
30	28.10	5
40	27.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	1466.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 187

NAME	1-Octatriacontene	STRUCTURAL FORMULA
		$CH_3(CH_2)_{35}CH=CH_2$
Mole % Pur.	Ref.	Molecular Formula $C_{38}H_{76}$	Molecular Weight 532.988

Property	Value	Ref.
F.P. °C	77.0	2
F.P. 100%		
B.P. °C 760 mm	510.	2
100	408.21	5
30	361.52	5
10	325.33	5
1	264.11	5
0.1	217.05	5
Press. mm t_e	1990.9	5
Density g/ml d_4^t 20°C	0.8223≠	2
25	0.8190≠	2
30	0.8158≠	4
a	0.8356	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4614≠	2
25	1.4594≠	2
30	1.4574≠	4
"C"	0.7419	4
MR (Obs.)	177.99	2
MR (Calc.)	177.317	5
(nD-d/2)	1.0502≠	2
Dielectric	2.13	5
A 365 to 612 °C	7.65055	4
B	3114.6	4
C	143.	5
A* 365 to 572 °C	2.60324	5
B*	3025.6	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 224 to 365 °C	2.50025	5
B'*	2973.6	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	572.76	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	180.76	5
BP	0.0782	4
t_e	0.0359	5
30 mm	1.1831	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	49.56	5
30 mm	42.29	5
BP	33.54	5
t_e	29.86	5
t_e (d, e)	29.81	5
ΔHv/T_e	20.36	5
d 365 to 562 °C	63.59	5
e	0.0589	5
d' 224 to 365 °C	60.50	5
e'	0.0504	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8889	5
t_e	0.8459	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.10	5
30	28.17	5
40	27.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	1505.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 188

NAME	1-Nonatriacontene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{78}$
Molecular Weight 547.014		$CH_3(CH_2)_{36}CH=CH_2$

		Ref.
F.P. °C	78.4	2
F.P. 100%		
B.P. °C 760 mm	517.	2
100	414.39	5
30	367.31	5
10	330.81	5
1	269.06	5
0.1	221.57	5
Press. mm t_e	2006.7	5
Density g/ml 20°C	0.8231≠	2
d_4^t 25	0.8198≠	2
30	0.8166≠	4
a	0.8364	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4618≠	2
25	1.4598≠	2
30	1.4618≠	4
"C"	0.7418	4
MR (Obs.)	182.63	2
MR (Calc.)	181.935	5
(nD-d/2)	1.0502≠	2
Dielectric	2.14	5
A 370 to 619 °C	7.65683	4
B	3147.4	4
C	142.	5
A* 370 to 579 °C	2.61874	5
B*	3058.4	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* 228 to 370 °C	2.51369	5
B'*	3004.9	5
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	580.82	5

		Ref.
dt/dP °C/mm 0.1 mm	182.40	5
BP	0.0788	2
t_e	0.0359	5
30 mm	1.1931	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	48.75	5
30 mm	41.60	5
BP	32.96	5
t_e	29.27	5
t_e (d, e)	29.25	5
ΔHv/T_e	20.35	5
d 370 to 569 °C	62.82	5
e	0.0578	5
d' 228 to 370 °C	59.61	5
e'	0.0490	5
d_c g/ml, v_c ml/g, t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8446	5
t_c		
ΔHc kcal/m, ΔHf, ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C, (B^v), (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.16	5
30	28.24	5
40	27.34	5
Parachor [P] 20°C, 30, 40		
Sugd.	1544.2	5
Exp. L. 1. %/wt. u.		
Dispersion	102.≠	2
Flash Point °C, Fire Point		
M Spec., Ultra V., X-Ray Dif., Infrared		
Solubility in⁺ Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

≠ for undercooled liquid ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 189

NAME	1-Tetracontene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{40}H_{80}$	Molecular Weight 561.040	$CH_3(CH_2)_{37}CH=CH_2$

Property	Value	Ref.
F.P. °C	79.8	2
F.P. 100%		
B.P. °C 760 mm	523.	2
100	419.69	5
30	372.28	5
10	335.51	5
1	273.31	5
0.1	225.48	5
Press. mm t_e	2022.3	5
Density g/ml 20°C	0.8238≠	2
d_4^t 25	0.8205≠	2
30	0.8173≠	4
a	0.8371	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4622≠	2
25	1.4602≠	2
30	1.4582≠	4
"C"	0.7417	4
MR (Obs.)	187.30	2
MR (Calc.)	186.553	5
(nD-d/2)	1.0502≠	2
Dielectric	2.14	5
A 376 to 625 °C	7.66107	4
B	3174.1	4
C	141.	5
A* 376 to 585 °C	2.63081	5
B*	3084.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* 232 to 376 °C	2.52552	5
B'*	3030.5	5
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	587.80	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	183.76	5
BP	0.0794	4
t_e	0.0359	5
30 mm	1.2016	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	47.92	5
30 mm	40.90	5
BP	32.39	5
t_e	28.70	5
t_e (d, e)	28.73	5
ΔHv/T_e	20.33	5
d 376 to 575 °C	61.94	5
e	0.0565	5
d' 232 to 376 °C	58.70	5
e'	0.0478	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8443	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.22	5
30	28.29	5
40	27.39	5
Parachor [P] 20°C		
30		
40		
Sugd.	1583.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in⁺ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   ⁺ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 1

NAME	Vinyl bromide / Bromoethene	STRUCTURAL FORMULA
Mole % Pur. 100.00	Ref. 1	$CHBr{=}CH_2$
Molecular Formula	C_2H_3Br	
Molecular Weight	106.960	

Property	Value	Ref.
F.P. °C	-139.54	1
F.P. 100%	-139.54	1
B.P. °C 760 mm	+15.80	2
100	-31.7	5
30	-52.3	5
10		
1		
Pressure mm 25°C	1033.	5
t_e	777.0	5
Density g/ml 20°C	1.4933≠	2
d^t_4 25	1.4738≠	2
30	1.4542≠	5
a	1.5730	4
b	-0.00372	4
Ref. Index n_D 20°C	1.441≠	2
25	1.435≠	2
30		
"C"	0.5847	5
MR (Obs.)	18.917	4
MR (Calc.)	18.734	5
(nD-d/2)	0.6944	5
Dielectric	5.628#	1
A -60 to 60 °C	6.66715	5
B	953.4	5
C	236.0	5
A* -60 to 20 °C	1.23701	5
B*	899.8	5
K		
c		
t_k to		
t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°	0.03453	1
B°		
t_e °C	16.44	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0300	5
BP	0.038	2
t_e	0.03736	5
30 mm	0.5224	5
ΔHm cal/g	11.44	4
ΔHv cal/g 25°C	50.5	5
30 mm	80.8	5
BP	52.4	5
t_e	51.6	5
t_e (d, e)	51.2	5
ΔHv/T_e	19.12	5
d -55 to 20 °C	58.0	5
e	0.417	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9512	5
30 mm	1.0000	5
BP	0.9650	5
t_e	0.9642	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η -20 °C	0.2759	1
-10	0.2528	1
0	0.2393	1
B^v -30 to 10 °C	213.8	4
A^v	$\bar{2}$.59636	4
(B^v)		
(A^v)		
c_p liq. °		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °		
f', g', h' to °		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	20.04≠	4
25	18.97≠	4
30	17.92≠	4
Parachor [P] 20°C		
30		
40		
Sugd.	152.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for the liquid at saturation pressure # at 5°C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 1, 2

PURIFICATION: 1, 2

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 2

NAME	Vinyl chloride	STRUCTURAL FORMULA
	Chloroethene	CH_2=CHCl

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
100.0	1	C_2H_3Cl	62.501

Property	Value	Ref.
F.P. °C	-153.79	1
F.P. 100%		
B.P. °C 760 mm	-13.37	1
100	-55.8	4
30	-73.95	4
10	-87.5	4
1	-109.42	4
Pressure mm 25°C	2660.0	4
t_e	692.3	5
Density g/ml -30°C	0.99986	1
d^t_4 -25	0.99176	1
-20	0.98343	1
a	0.95421	4
b	-0.00158	4
Ref. Index n_D -10°C	1.4046	5
25		
30		
"C"	0.54	5
MR (Obs.)		
MR (Calc.)	15.836	5
(nD-d/2)-10°C	0.9213	5
Dielectric	6.26≠	1
A -100 to 50 °C	6.49712	4
B	783.4	4
C	230.0	4
A* -80 to 0 °C	0.84290	5
B*	727.85	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 50 to t_c °C	10.71749	5
Bc	4927.2	5
Cc	652.	5
Cryos. consts. A°	0.04002	1
B°		
t_e °C	-15.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.01355	4
BP	0.03423	4
t_e	0.03675	5
30 mm	0.4500	4
ΔHm cal/g	18.14	4
ΔHv cal/g 25°C	71.26	5
30 mm	93.50	5
BP	79.53	5
t_e	79.84	5
t_e (d, e)	80.08	5
ΔHv/T_e	19.38	5
d -80 to 20 °C	76.45	5
e	0.2306	5
d' to °C		
e'		
d_c g/ml	0.370	5
v_c ml/g	2.70	5
t_c °C	156.5	5
P_c mm	42000.	5
PV/RT 25°C	0.9178	5
30 mm	1.0000	5
BP	0.9640	5
t_e	0.9652	5
t_c	0.264	5
ΔHc kcal/m		
ΔHf	-144.0	5
ΔFf		
Viscosity centistokes η -40 °C	0.3339	1
-30	0.3026	1
-20	0.2780	1
-10	0.2563	5
B^v -50 to -10 °C	234.945	4
A^v	7.51616	4
(B^v) to °C		
(A^v)		
c_p liq. 293°K	0.38	1
c_p vap. 298°K	0.205	1
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm γ -30°C	23.87	5
-20	22.27	5
-10	20.88	5
Parachor [P] 20°C		
30		
40		
Sugd.	138.4	5
Exp. L. l. %/wt.	2.5	1
u.	69.9	1
Dispersion		
Flash Point °C	-78.0	1
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in	0.11	1

T_R = 0.75 T_c ≠ 17.2°C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 3

NAME	cis-1-Chloro-1-propene	STRUCTURAL FORMULA
		$CHCl{=}CH{-}CH_3$
Mole % Pur. — Ref. 2	Molecular Formula C_3H_5Cl — Molecular Weight 76.527	

		Ref.
F.P. °C	-134.8	2
F.P. 100%		
B.P. °C 760 mm	+32.8	2
100	-15.1	5
30	-36.2	5
10	-52.1	5
1		
Pressure mm 25°C	575.0	5
t_e	817.9	5
Density g/ml 20°C	0.9347	2
d_4^t 25	0.9271	2
30	0.9193	5
a	0.9656	4
b	-0.00144	4
Ref. Index n_D 20°C	1.4055	2
25	1.400	2
30		
"C"	0.5780	4
MR (Obs.)	20.828	4
MR (Calc.)	20.454	5
(nD-d/2)	0.9382	4
Dielectric		
A -40 to	6.88871	5
B 95 °C	1065.3	5
C	233.	5
A* -40 to	1.24621	5
B* 45 °C	994.8	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 95 to	7.26279	5
Bc t_c °C	1322.0	5
Cc	270.	5
Cryos. consts. A°		
B°		
t_e °C	34.93	5

		Ref.
dt/dP °C/mm 25°C	0.0472	5
BP	0.0379	5
t_e	0.03578	5
30 mm	0.5266	5
ΔHm cal/g		
ΔHv cal/g 25°C	81.72	5
30 mm	92.30	5
BP	80.42	5
t_e	80.38	5
t_e (d, e)	80.06	5
$\Delta Hv/T_e$	19.96	5
d -40 to	86.07	5
e 40 °C	0.1722	5
d' to		
e' °C		
d_c g/ml	0.337	5
v_c ml/g	2.97	5
t_c °C	217.8	5
P_c mm	35700.	5
PV/RT 25°C	0.9631	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9540	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.84	5
25	21.10	5
30	20.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	177.4	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 4

NAME	trans-1-Chloro-1-propene	STRUCTURAL FORMULA
		CHCl=CH-CH_3

Mole % Pur.	Ref. 2	Molecular Formula C_3H_5Cl	Molecular Weight 76.527

		Ref.
F.P. °C	-99.0	2
F.P. 100%		
B.P. °C 760 mm	37.4	2
100	-11.2	5
30	-32.6	5
10	-48.7	5
1		
Pressure mm 25°C	487.2	5
t_e	830.8	5
Density g/ml 20°C	0.935	2
d^t_4 25	0.927	2
30	0.9185	4
a	0.9696	5
b	-0.00162	5
Ref. Index n_D 20°C	1.4054	2
25	1.400	2
30		
"C"	0.578	5
MR (Obs.)	20.828	4
MR (Calc.)	20.454	5
(nD-d/2)	0.9379	4
Dielectric		
A -40 to	6.88340	5
B 100 °C	1078.3	5
C	232.	5
A* -40 to	1.24083	5
B* 50 °C	1007.1	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 100 to	7.28034	5
Bc t_c °C	1349.	5
Cc	270.	5
Cryos. A°		
consts. B°		
t_e °C	40.03	5

		Ref.
dt/dP °C/mm		
25°C	0.05405	5
BP	0.0385	5
t_e	0.03594	5
30 mm	0.5341	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.51	5
30 mm	93.81	5
BP	81.57	5
t_e	81.03	5
t_e (d, e)	81.11	5
ΔHv/T_e	19.82	5
d -40 to	88.11	5
e 50 °C	0.1748	5
d' to		
e' °C		
d_c g/ml	0.333	5
v_c ml/g	3.000	5
t_c °C	225.0	5
P_c mm	35900.	5
PV/RT		
25°C	0.9654	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9525	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °C		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °C		
h		
f' to		
g' °C		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	21.77	5
γ 25	21.13	5
30	20.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	177.4	5
Exp. L.l.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	1,1,2-Trichloroethylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_2HCl_3	Molecular Weight 131.399	$CCl_2{=}CHCl$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	87.08	1
100	31.54	4
30	6.90	5
10	-11.85	5
1	-42.89	5
Pressure mm 25°C	74.31	5
t_e	975.52	5
Density g/ml 20°C	1.46422	1
d_4^t 25	1.45541	1
60	1.39501	1
a	1.49948	4
b	-0.00174	4
Ref. Index n_D 20°C	1.47734	1
25	1.47457	1
50	1.46056	1
"C"	0.4302	4
MR (Obs.)	25.37	4
MR (Calc.)	25.57	5
(nD-d/2)	0.74523	4
Dielectric		
A 7 to	7.02808	4
B 155 °C	1315.0	4
C	230.	4
A* 7 to	1.54642	5
B* 106 °C	1230.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 155 to	7.4675	5
Bc t_c °C	1675.	5
Cc	280.	5
Cryos. A° consts. B°		
t_e °C	95.60	5

		Ref.
dt/dP °C/mm 25°C	0.2890	5
BP	0.04369	5
t_e	0.0359	5
30 mm	0.6178	5
ΔHm cal/g		
ΔHv cal/g 25°C	62.33	5
30 mm	64.02	5
BP	56.43	5
t_e	55.61	5
t_e (d, e)	55.62	5
ΔHv/T_e	19.81	5
d 7 to	64.67	5
e 96 °C	0.0946	5
d' to		
e' °C		
d_c g/ml	0.513	5
v_c ml/g	1.950	5
t_c °C	298.	5
P_c mm	36876.	5
PV/RT 25°C	0.9957	5
30 mm	1.0000	5
BP	0.9578	5
t_e	0.9507	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.3844	1
40	0.3291	1
60	0.2867	1
80	0.2553	1
B^v 10 to	311.03	4
A^v 70 °C	$\bar{2}$.52395	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.28	1
30	27.94	1
40	26.76	1
Parachor [P] 20°C	208.7	4
30	208.8	4
40	209.0	4
Sugd.	212.8	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 6

NAME	Perchloroethylene	STRUCTURAL FORMULA
		$CCl_2=CCl_2$
Mole % Pur.	Ref.	Molecular Formula C_2Cl_4	Molecular Weight 165.848

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	120.97	1
100	60.97	4
30	34.37	4
10	14.02	5
1	-20.12	5
Pressure mm 25°C	18.47	5
t_e	1086.	5
Density g/ml 20°C	1.62272	1
d^t_4 25	1.61446	1
30	1.60590	4
a	1.65599	4
b	-0.00166	4
Ref. Index n_D 20°C	1.50534	1
25	1.50284	1
30	1.50004	4
"C"	0.4095	4
MR (Obs.)	30.34	4
MR (Calc.)	30.437	5
(nD-d/2)	0.69417	4
Dielectric		
A 34 to 187 °C	7.02003	4
B	1415.5	4
C	221.	4
A* 34 to 144 °C	1.58865	5
B*	1321.5	5
K		
c		
t_k to t_x °C		
A' 25 to 34 °C	7.41073	5
B'	1622.1	5
C'	239.	5
A'* 25 to 34 °C	1.96901	5
B'*	1518.6	5
Ac 187 to t_c °C	7.4489	5
Bc	1787.	5
Cc	271.	5
Cryos. consts. A° B°		
t_e °C	134.28	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.0102	5
BP	0.04721	5
t_e	0.0357	5
30 mm	0.6670	5
ΔHm cal/g		
ΔHv cal/g 25°C	57.09	5
30 mm	56.65	5
BP	50.0	5
t_e	48.96	5
t_e (d, e)	48.98	5
$\Delta Hv/T_e$	19.93	5
d 34 to 134 °C	59.29	5
e	0.0768	5
d' 25 to 34 °C	58.27	5
e'	0.0472	5
d_c g/ml	0.573	4
v_c ml/g	1.745	4
t_c °C	340.	5
P_c mm	33687.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9672	5
t_e	0.9580	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	0.54976	1
40	0.45702	1
60	0.39347	1
80	0.34061	1
B^v 10 to 90 °C	353.2	4
A^v	$\bar{2}$.53223	4
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	31.33	1
30	30.81	1
40	30.20	1
Parachor [P] 20°C	241.8	4
30	243.3	4
40	244.6	4
Sugd.	250.0	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 7

NAME	Hexachloropropene
	Hexachloropropylene
Mole % Pur.	
Ref.	
Molecular Formula	C_3Cl_6
Molecular Weight	248.772
STRUCTURAL FORMULA	$CCl_3CCl=CCl_2$

		Ref.
F.P. °C	-57.12	1
F.P. 100%		
B.P. °C 760 mm	214.14	1
100	141.13	1
30	108.97	4
10	84.5	5
1	43.5	5
Pressure mm 25°C	0.2717	5
t_e	1336.0	5
Density g/ml 20°C	1.76376	1
d^t_4 25	1.75656	1
30	1.7494	4
a	1.79256	4
b	-0.00144	4
Ref. Index n_D 20°C	1.54956	1
25	1.54720	1
30	1.53570	1
"C"	0.40748	4
MR (Obs.)	44.903	4
MR (Calc.)	44.787	5
(nD-d/2)	0.66768	4
Dielectric	2.682	1
A 109 to 267 °C	6.92329	1
B	1649.33	1
C	193.87	1
A* 110 to 250 °C	1.61793	5
B*	1550.51	5
K		
c		
t_k to °C		
t_x		
A' 20 to 109 °C	7.2664	5
B'	1863.7	5
C'	212.95	5
A'* 20 to 109 °C	1.9832	5
B'*	1765.4	5
Ac 269 to t_c °C	7.3256	5
Bc	2041.	5
Cc	245.7	5
Cryos. consts. A°		
B°		
t_e °C	240.45	5

		Ref.
dt/dP °C/mm 25°C	48.562	5
BP	0.05767	4
t_e	0.03718	5
30 mm	0.8050	4
ΔHm cal/g		
ΔHv cal/g 25°C	53.40	5
30 mm	47.91	5
BP	40.7	5
t_e	39.04	5
t_e (d, e)	38.89	5
ΔHv/T_e	19.06	5
d 100 to 245 °C	55.41	5
e	0.0687	5
d' 20 to 100 °C	55.03	5
e'	0.0653	5
d_c g/ml	0.58	5
v_c ml/g	1.72	5
t_c °C	447.	5
P_c mm	23966.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9522	5
t_e	0.9348	5
t_c	0.229	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	1.9698	1
40	1.4049	1
60	1.0652	1
80	0.8515	1
B^v 35 to 90 °C	601.4	4
A^v	$\bar{2}$.22746	4
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	38.12	1
30	36.95	1
40	35.87	1
Parachor [P] 20°C	350.5	4
30	349.2	4
40	350.9	4
Sugd.	363.4	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	0.015	1
Water in	0.014	1

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dist. chromat.

LITERATURE REFERENCES:

No. 1

NAME	Propadiene		STRUCTURAL FORMULA
	Allene		$CH_2=C=CH_2$
Mole % Pur.	Ref.	Molecular Formula C_3H_4	Molecular Weight 40.062

Property	Value	Ref.
F.P. °C	-136.	2
F.P. 100%		
B.P. °C		
760 mm	-34.5	2
100	-73.0	4
30	-88.2	4
10	-99.	4
1		
Pressure mm 25°C	4286.	5
t_e	637.1	5
Density g/ml 20°C		
d^t_4 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A -95 to 25 °C	5.6457	2
B	441.0	2
C	194.0	2
A* -90 to 15 °C	$\bar{1}$.89775	5
B*	410.5	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac t_c to °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	-38.8	5

Property	Value	Ref.
dt/dP °C/mm		
25°C	0.0110	5
BP	0.033	4
t_e	0.0372	5
30 mm	0.3674	5
ΔHm cal/g		
ΔHv cal/g 25°C		
30 mm	153.8	5
BP	109.0	5
t_e	112.0	5
t_e (d, e)	112.5	5
$\Delta Hv/T_e$	19.23	5
d -90 to -30 °C	80.2	5
e	0.834	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	120.0	2
P_c mm		
PV/RT 25°C	0.8750	5
30 mm	1.0000	5
BP	0.9700	5
t_e	0.9769	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °C		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f to °C		
g		
h		
f' to °C		
g'		
h'		
m to °K		
n		
o		
m' to °K		
n'		
o'		
Surface tension dynes/cm. γ 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.		
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	1,2-Butadiene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_4H_6	Molecular Weight 54.088	$CH_2{=}C{=}CHCH_3$

		Ref.
F.P. °C	-136.190	2
F.P. 100%		
B.P. °C 760 mm	10.85	2
100	-33.83	2
30	-54.	2
10	-69.07	2
1	-94.48	5
Pressure mm 25°C	1259.8	5
t_e	758.60	5
Density g/ml 20°C	0.652≠	2
d_4^t 25	0.646≠	2
30	0.640	4
a	0.6770	4
b	-0.0011	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	19.738	5
(nD-d/2)		
Dielectric		
A (-54 to 68 °C)	7.1619	2
B	1121.	2
C	251.0	2
A* (-54 to 21 °C)	1.37634	5
B*	1045.57	5
K		
c		
t_k to t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (68 to t_c °C)	7.62883	5
Bc	1438.26	5
Cc	293.28	5
Cryos. consts. A°		
B°		
t_e °C	10.80	5

		Ref.
dt/dP °C/mm 25°C	0.0234	5
BP	0.03495	4
t_e	0.03500	5
30 mm	0.5022	5
ΔHm cal/g		
ΔHv cal/g 25°C	104.13	5
30 mm	117.39	5
BP	106.74	5
t_e	106.76	5
t_e (d, e)	106.75	5
ΔHv/T_e	20.33	5
d (-54 to 11 °C)	108.53	5
e	0.1646	5
d' to		
e' °C		
d_c g/ml	0.2468	3
v_c ml/g	4.051	3
t_c °C	170.6	3
P_c mm	33770.	3
PV/RT 25°C	0.9461	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9601	5
t_c		
ΔHc kcal/m	588.37	2
ΔHf gas	38.77	2
ΔFf gas	47.43	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.35553	2
400	0.43522	2
c_v vap.		

		Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	0.0654	4
n	0.0011	4
o	-0.0_642	4
m' (700 to 1000 °K)	0.1346	4
n'	0.0_390	4
o'	-0.0_630	4
Surface tension dynes/cm. γ 20°C	16.56	5
30	15.24	5
40	13.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	168.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 ASTM Sp. Tech. Pub. 109

No. 3

NAME	1,3-Butadiene	STRUCTURAL FORMULA
Mole % Pur. Ref.	Molecular Formula C_4H_6 / Molecular Weight 54.088	CH_2=CHCH=CH_2

Property	Value	Ref.
F.P. °C	-108.915	2
F.P. 100%		
B.P. °C 760 mm	-4.413	2
100	-47.035	2
30	-65.74	2
10	-79.89	2
1	-103.17	5
Pressure mm 25°C	2104.5	5
t_e	714.96	5
Density g/ml 20°C	0.6211≠	2
d^t_4 25	0.6149≠	2
30	0.6086	4
a	0.6480	4
b	-0.0011	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	21.008	5
(nD-d/2)		
Dielectric		
A -66 to	6.85941	2
B 46 °C	935.53	2
C	239.55	2
A* -66 to	1.11738	5
B* 5 °C	872.39	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 46 to	7.29710	5
Bc t_c °C	1202.54	5
Cc	277.80	5
Cryos. consts. A° B°		
t_e °C	-5.97	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0154	5
BP	0.03377	4
t_e	0.03542	5
30 mm	0.4675	5
ΔHm cal/g		
ΔHv cal/g 25°C	92.25	5
30 mm	112.75	5
BP	98.89	5
t_e	99.26	5
t_e (d, e)	99.25	5
ΔHv/T_e	20.09	5
d -66 to	97.90	5
e -6 °C	0.2259	5
d' e' to °C		
d_c g/ml	0.245	2
v_c ml/g	4.082	2
t_c °C	152.	2
P_c mm	32452.	2
PV/RT 25°C	0.9269	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9616	5
t_c	0.271	2
ΔHc kcal/m	575.93	2
ΔHf	21.21	2
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.35331	2
400	0.44908	2
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m 300 to	-0.0514	4
n 600 °K	0.0016	4
o	-0.0_698	4
m' 700 to	0.1766	4
n' 1000 °K	0.0_387	4
o'	-0.0_630	4
Surface tension dynes/cm. γ 20°C	13.41	5
30	12.20	5
40	11.01	5
Parachor [P] 20°C		
30		
40		
Sugd.	168.2	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	1,2-Pentadiene	STRUCTURAL FORMULA
		CH_2=C=CHCH_2CH_3

Mole % Pur.	Ref.	Molecular Formula C_5H_8	Molecular Weight 68.114

		Ref.
F.P. °C	-137.26	2
F.P. 100%		
B.P. °C		
760 mm	44.856	2
100	-4.27	2
30	-26.04	2
10	-42.6	2
1	-69.99	5
Pressure mm 25°C	367.26	5
t_e	853.68	5
Density g/ml 20°C	0.69257	2
d^t_4 25	0.68760	2
30	0.68259	4
a	0.71265	4
b	-0.0_3947	4
Ref. Index n_D 20°C	1.42091	2
25	1.41773	2
30	1.41446	4
"C"	0.8080	4
MR (Obs.)	24.936	2
MR (Calc.)	24.356	5
(nD-d/2)	1.07462	2
Dielectric	2.02	5
A -26 to 97 °C	7.01100	2
B	1154.42	2
C	234.65	2
A* -26 to 58 °C	1.29889	5
B*	1079.85	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 97 to t_c °C	7.44719	5
Bc	1462.26	5
Cc	276.31	5
Cryos. consts. A°		
B°		
t_e °C	48.31	5

		Ref.
dt/dP °C/mm		
25°C	0.0691	5
BP	0.03867	4
t_e	0.03528	5
30 mm	0.5457	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.47	5
30 mm	108.86	5
BP	95.76	5
t_e	95.12	5
t_e (d, e)	95.12	5
ΔHv/T_e	20.15	5
d -26 to 48 °C	104.05	5
e	0.1847	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	221.	5
P_c mm	32089.	5
PV/RT		
25°C	0.9744	5
30 mm	1.0000	5
BP	0.9575	5
t_e	0.9543	5
t_c		
ΔHc kcal/m	736.25	2
ΔHf gas	34.80	2
ΔFf gas	50.29	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37144	2
400	0.46099	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0148	4
n	0.0014	4
o	-0.0_673	4
m' 700 to 1000 °K	0.1189	4
n'	0.0010	4
o'	-0.0_637	4
Surface tension dynes/cm. γ 20°C	19.57	5
30	18.41	5
40	17.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	164.6	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	1, cis-3-Pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_8 — Molecular Weight 68.114	CH_2=CH CH=CH CH_3

		Ref.
F.P. °C	-140.820	2
F.P. 100%		
B.P. °C 760 mm	44.068	2
100	-5.02	2
30	-26.67	2
10	-43.1	2
1	-70.22	5
Pressure mm 25°C	379.07	5
t_e	851.42	5
Density g/ml 20°C	0.69102	2
d^t_4 25	0.68592	2
30	0.68078	4
a	0.7116	4
b	-0.0_397	4
Ref. Index n_D 20°C	1.43634	2
25	1.43291	2
30	1.42943	4
"C"	0.8377	4
MR (Obs.)	25.790	2
MR (Calc.)	25.626	5
(nD-d/2)	1.09083	2
Dielectric	2.06	5
A -27 to 96 °C	6.94178	2
B	1118.37	2
C	231.33	2
A* -27 to 57 °C	1.23515	5
B*	1046.11	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 96 to t_c °C	7.37139	5
Bc	1417.55	5
Cc	272.55	5
Cryos. A° consts. B°		
t_e °C	47.45	5

		Ref.
dt/dP °C/mm 25°C	0.0673	5
BP	0.03875	4
t_e	0.03544	5
30 mm	0.5421	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.84	5
30 mm	109.02	5
BP	95.09	5
t_e	94.44	5
t_e (d, e)	94.42	5
ΔHv/T_e	20.06	5
d -27 to 47 °C	103.76	5
e	0.1969	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	219.	5
P_c mm	30901.	5
PV/RT 25°C	0.9739	5
30 mm	1.0000	5
BP	0.9575	5
t_e	0.9543	5
t_c		
ΔHc kcal/m	720.15	2
ΔHf gas	18.70	2
ΔFf gas	34.88	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.33326	2
400	0.43310	2
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	-0.0544	4
n		0.0015	4
o		-0.0_673	4
m'	700 to 1000 °K	0.1498	4
n'		0.0_391	4
o'		-0.0_629	4
Surface tension dynes/cm. γ 20°C		19.39	5
30		18.21	5
40		17.05	5
Parachor [P] 20°C			
30			
40			
Sugd.		207.2	5
Exp. L. 1.%/wt.			
u.			
Dispersion		243.8	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 6

NAME	1, trans-3-Pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_8 / Molecular Weight 68.114	CH_2=CHCH=CHCH$_3$

		Ref.
F.P. °C	-87.470	2
F.P. 100%		
B.P. °C 760 mm	42.032	2
100	-7.06	2
30	-28.7	2
10	-45.1	2
1	-72.15	5
Pressure mm 25°C	410.5	5
t_e	845.6	5
Density g/ml 20°C d_4^t	0.67603	2
25	0.67102	2
30	0.66597	4
a	0.6963	4
b	-0.0$_3$95	4
Ref. Index n_D 20°C	1.43008	2
25	1.42669	2
30	1.42302	4
"C"	0.8448	4
MR (Obs.)	26.032	2
MR (Calc.)	25.626	5
(nD-d/2)	1.09206	2
Dielectric	2.04	5
A (-29 to 92 °C)	6.92257	2
B	1108.94	2
C	232.34	2
A* (-29 to 55 °C)	1.21772	5
B*	1036.67	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac (92 to t_c °C)	7.35341	5
Bc	1406.44	5
Cc	273.32	5
Cryos. consts. A° B°		
t_e °C	45.22	5

		Ref.
dt/dP °C/mm 25°C	0.0632	5
BP	0.03879	4
t_e	0.03567	5
30 mm	0.5414	5
ΔHm cal/g		
ΔHv cal/g 25°C	97.06	5
30 mm	107.39	5
BP	93.76	5
t_e	93.17	5
t_e (d, e)	93.15	5
ΔHv/T_e	19.93	5
d (-29 to 45 °C)	101.86	5
e	0.1926	5
d' e' (to °C)		
d_c g/ml		
v_c ml/g		
t_c °C	214.	5
P_c mm	29456.	5
PV/RT 25°C	0.9724	5
30 mm	1.0000	5
BP	0.9575	5
t_e	0.9545	5
t_c		
ΔHc kcal/m	720.05	2
ΔHf gas	18.60	2
ΔFf gas	35.07	2
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. 300°K	0.36556	2
400	0.45806	2
c_v vap.		

		Ref.
f g h (to °K)		
f' g' h' (to °K)		
m (300 to 600 °K)	0.0087	4
n	0.0014	4
o	-0.0$_6$66	4
m' (700 to 1000 °K)	0.1303	4
n'	0.0010	4
o'	-0.0$_6$37	4
Surface tension dynes/cm. γ 20°C	17.75	5
30	16.66	5
40	15.58	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L.1.%/wt. u.		
Dispersion	245.7	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 7

NAME	1,4-Pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_8 / Molecular Weight 68.114	CH_2=CH CH_2CH=CH_2

Property	Value	Ref.
F.P. °C	-148.275	2
F.P. 100%		
B.P. °C 760 mm	25.967	2
100	-20.96	2
30	-41.5	2
10	-57.1	2
1	-82.69	5
Pressure mm 25°C	734.3	5
t_e	800.1	5
Density g/ml 20°C	0.66076	2
d_4^t 25	0.65571	2
30	0.6506	4
a	0.6816	4
b	-0.0$_3$92	4
Ref. Index n_D 20°C	1.38876	2
25	1.38542	2
30	1.38247	4
"C"	0.7857	4
MR (Obs.)	24.367	2
MR (Calc.)	24.356	5
(nD-d/2)	1.05838	2
Dielectric	1.93	5
A -41 to 72 °C	6.84880	2
B	1025.016	2
C	232.354	2
A* -41 to 37 °C	1.1686	5
B*	957.53	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac 72 to t_c °C	7.27510	5
Bc	1301.04	5
Cc	270.91	5
Cryos. consts. A° B°		
t_e °C	27.43	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0382	5
BP	0.03720	4
t_e	0.03573	5
30 mm	0.5142	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.28	5
30 mm	101.49	5
BP	88.09	5
t_e	87.82	5
t_e (d, e)	87.80	5
ΔHv/T_e	19.90	5
d -41 to 27 °C	93.24	5
e	0.1985	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C	187.	5
P_c mm	27238.	5
PV/RT 25°C	0.9589	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9565	5
t_c		
ΔHc kcal/m	726.65	2
ΔHf gas	25.20	2
ΔFf gas	40.69	2
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.36997	2
400	0.45952	2
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0221	4
n	0.0013	4
o	-0.0$_6$66	4
m' 700 to 1000 °K	0.1175	4
n'	0.0010	4
o'	-0.0$_6$37	4
Surface tension dynes/cm. γ 20°C	16.09	5
30	15.03	5
40	13.98	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L. 1. %/wt. u.		
Dispersion	153.1	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	2,3-Pentadiene	STRUCTURAL FORMULA
Mole % Pur. Ref.	Molecular Formula C_5H_8 / Molecular Weight 68.114	$CH_3CH=C=CHCH_3$

		Ref.
F.P. °C	-125.650	2
F.P. 100%		
B.P. °C 760 mm	48.265	2
100	-0.64	2
30	-22.1	2
10	-38.4	2
1	-65.24	5
Pressure mm 25°C	320.0	5
t_e	862.8	5
Density g/ml 20°C	0.69502	2
d^t_4 25	0.69000	2
30	0.68494	4
a	0.7152	4
b	-0.0_396	4
Ref. Index n_D 20°C	1.42842	2
25	1.42509	2
30	1.42170	4
"C"	0.8187	4
MR (Obs.)	25.235	2
MR (Calc.)	24.356	5
(nD-d/2)	1.08091	2
Dielectric	2.04	5
A -22 to 101 °C	6.88603	2
B	1086.64	2
C	223.04	2
A* -22 to 62 °C	1.18444	5
B*	1018.30	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 101 to t_c °C	7.30054	5
Bc	1372.39	5
Cc	263.23	5
Cryos. consts. A°		
B°		
t_e °C	52.05	5

		Ref.
dt/dP °C/mm 25°C	0.0768	5
BP	0.03870	4
t_e	0.03505	5
30 mm	0.5377	5
ΔHm cal/g		
ΔHv cal/g 25°C	102.91	5
30 mm	114.00	5
BP	97.70	5
t_e	96.86	5
t_e (d, e)	96.82	5
$\Delta Hv/T_e$	20.28	5
d -22 to 52 °C	108.87	5
e	0.2315	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	226.	5
P_c mm	31482.	5
PV/RT 25°C	0.9770	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9534	5
t_c		
ΔHc kcal/m	734.55	2
ΔHf gas	33.10	2
ΔFf gas	49.22	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.35675	2
400	0.43897	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0660	4
n	0.0011	4
o	-0.0_637	4
m' 700 to 1000 °K	0.0790	4
n'	0.0010	4
o'	-0.0_637	4
Surface tension dynes/cm. γ 20°C	19.87	5
30	18.69	5
40	17.53	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	174.5	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 9

NAME	3-Methyl-1,2-butadiene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_5H_8	Molecular Weight 68.114	$CH_2=C=C(CH_3)CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	40.	2
100	-8.	2
30	-30.	2
10	-46.	2
1	-72.69	5
Pressure mm 25°C	438.6	5
t_e	840.4	5
Density g/ml 20°C	0.680	2
d^t_4 25	0.675	2
30	0.670	4
a	0.7002	4
b	$-0.0_{3}94$	4
Ref. Index n_D 20°C	1.410	2
25	1.407	2
30	1.404	4
"C"	0.8028	4
MR (Obs.)	24.818	4
MR (Calc.)	24.356	5
(nD-d/2)	1.070	2
Dielectric	1.99	5
A -30 to 90 °C	7.005	2
B	1130.	2
C	234.	2
A* -30 to 53 °C	1.29994	5
B*	1057.09	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 90 to t_c °C	7.43814	5
Bc	1428.51	5
Cc	274.34	5
Cryos. consts. A°		
B°		
t_e °C	42.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0588	5
BP	0.03796	4
t_e	0.03507	5
30 mm	0.5353	5
ΔHm cal/g		
ΔHv cal/g 25°C	97.50	5
30 mm	107.81	5
BP	94.63	5
t_e	94.08	5
t_e (d, e)	94.08	5
ΔHv/T_e	20.27	5
d -30 to 43 °C	102.21	5
e	0.1894	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	212.	5
P_c mm	31519.	5
PV/RT 25°C	0.9713	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9555	5
t_c		
ΔHc kcal/m	732.45	2
ΔHf gas	31.00	2
ΔFf gas	47.47	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37144	2
400	0.45512	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0588	4
n	0.0012	4
o	$-0.0_{6}51$	4
m' 700 to 1000 °K	0.1525	4
n'	$0.0_{3}91$	4
o'	$-0.0_{6}29$	4
Surface tension dynes/cm. γ 20°C	18.16	5
30	17.05	5
40	15.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+]		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 10

NAME	2-Methyl-1, 3-butadiene		STRUCTURAL FORMULA
	Isoprene		$CH_2=C(CH_3)CH=CH_2$
Mole % Pur.	Ref.	Molecular Formula C_5H_8	Molecular Weight 68.114

		Ref.
F.P. °C	-145.950	2
F.P. 100%		
B.P. °C 760 mm	34.067	2
100	-14.21	2
30	-35.5	2
10	-51.6	2
1	-78.08	5
Pressure mm 25°C	550.0	5
t_e	824.2	5
Density g/ml 20°C	0.68095	2
d^t_4 25	0.67587	2
30	0.67074	4
a	0.7017	4
b	-0.0_395	4
Ref. Index n_D 20°C	1.42194	2
25	1.41852	2
30	1.41524	4
"C"	0.8237	4
MR (Obs.)	25.416	2
MR (Calc.)	25.626	5
(nD-d/2)	1.08146	2
Dielectric	2.02	5
A (-35 to 84 °C)	6.90334	2
B	1080.996	2
C	234.67	2
A* (-35 to 46 °C)	1.20523	5
B*	1009.21	5
K		
c		
t_k (to °C)		
t_x		
A' (to °C)		
B'		
C'		
A'* (to °C)		
B'*		
Ac (84 to t_c °C)	7.33735	5
Bc	1374.92	5
Cc	275.34	5
Cryos. consts. A°		
B°		
t_e °C	36.44	5

		Ref.
dt/dP °C/mm 25°C	0.0492	5
BP	0.03817	4
t_e	0.03582	5
30 mm	0.5315	5
ΔHm cal/g		
ΔHv cal/g 25°C	92.34	5
30 mm	103.42	5
BP	90.67	5
t_e	90.23	5
t_e (d, e)	90.24	5
ΔHv/T_e	19.85	5
d (-35 to 36 °C)	96.92	5
e	0.1834	5
d' (to °C)		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	202.	5
P_c mm	28860.	5
PV/RT 25°C	0.9671	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9568	5
t_c		
ΔHc kcal/m	719.55	2
ΔHf	11.80	2
ΔFf		
Viscosity centistokes η °C		
B^v (to °C)		
A^v		
(B^v) (to °C)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36997	2
400	0.46686	2
c_v vap.		

		Ref.
f (to °K)		
g		
h		
f' (to °K)		
g'		
h'		
m (300 to 600 °K)	-0.0351	4
n	0.0016	4
o	-0.0_695	4
m' (700 to 1000 °K)	0.1880	4
n'	0.0_388	4
o'	-0.0_629	4
Surface tension dynes/cm. γ 20°C	18.22	5
30	17.08	5
40	15.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.2	5
Exp. L. 1. %/wt. u.		
Dispersion	224.8	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	1,2-Hexadiene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140	$CH_2{=}C{=}CH(CH_2)_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	76.	2
100	23.40	5
30	0.064	5
10	-17.70	5
1	-47.11	5
Pressure mm 25°C	107.7	5
t_e	940.1	5
Density g/ml 20°C	0.7149	2
d^t_4 25	0.7102	2
30	0.7055	4
a	0.7337	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.4282	2
25	1.4252	2
30	1.4222	4
"C"	0.7955	4
MR (Obs.)	29.572	4
MR (Calc.)	28.974	5
(nD-d/2)	1.0708	2
Dielectric	2.04	5
A 0 to	7.03380	4
B 123 °C	1248.39	4
C	224.6	5
A* 0 to	1.37445	5
B* 93 °C	1171.46	5
K		
c		
t_k to, t_x °C		
A' to, B' °C, C'		
A'* to, B'* °C		
Ac to, Bc t_c °C, Cc		
Cryos. consts. A°, B°		
t_e °C	82.84	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2012	5
BP	0.04136	4
t_e	0.03497	5
30 mm	0.5853	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.35	5
30 mm	102.88	5
BP	89.22	5
t_e	88.03	5
t_e (d, e)	87.99	5
$\Delta Hv/T_e$	20.31	5
d 0 to	102.89	5
e 83 °C	0.1799	5
d' to, e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9915	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9490	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to, A^v °C		
(B^v) to, (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.04	5
30	19.92	5
40	18.84	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 12

NAME	1, cis-3-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	CH_2=CHCH=CHCH$_2$CH$_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	73.	2
100	20.78	5
30	-2.37	5
10	-20.00	5
1	-49.18	5
Pressure mm 25°C	121.55	5
t_e	931.49	5
Density g/ml 20°C	0.705	2
d^t_4 25	0.700	2
30	0.6950	4
a	0.7250	4
b	-0.0398	4
Ref. Index n_D 20°C	1.438	2
25	1.435	2
30	1.432	4
"C"	0.8241	4
MR (Obs.)	30.585	4
MR (Calc.)	30.244	5
(nD-d/2)	1.086	2
Dielectric	2.07	5
A (-2 to 118 °C)	7.02864	4
B	1236.47	4
C	225.1	5
A* (-2 to 89 °C)	1.37294	5
B*	1160.15	5
K		
c		
t_k to t_x °C		
A' B' C' (to °C)		
A'* B'* (to °C)		
Ac Bc Cc (to t_c °C)		
Cryos. consts. A° B°		
t_e °C	79.49	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1807	5
BP	0.04106	4
t_e	0.03498	5
30 mm	0.5808	5
ΔHm cal/g		
ΔHv cal/g 25°C	96.88	5
30 mm	101.84	5
BP	88.32	5
t_e	87.17	5
t_e (d, e)	87.16	5
ΔHv/T_e	20.30	5
d (-2 to 79 °C)	101.41	5
e	0.1793	5
d' e' (to °C)		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9901	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9493	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v (to °C)		
(B^v) (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h (to °K)		
f' g' h' (to °K)		
m n o (to °K)		
m' n' o' (to °K)		
Surface tension dynes/cm. γ 20°C	19.89	5
30	18.76	5
40	17.65	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	1, trans-3-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	CH_2=CHCH=CHCH$_2$CH$_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	73.	2
100	20.78	5
30	-2.37	5
10	-20.00	5
1	-49.18	5
Pressure mm 25°C	121.55	5
t_e	931.49	5
Density g/ml 20°C	0.705	2
d^t_4 25	0.700	2
30	0.6950	4
a	0.7250	4
b	-0.0$_3$98	4
Ref. Index n_D 20°C	1.438	2
25	1.435	2
30	1.432	4
"C"	0.8241	4
MR (Obs.)	30.585	4
MR (Calc.)	30.244	5
(nD-d/2)	1.086	2
Dielectric	2.07	5
A (-2 to 118 °C)	7.02864	4
B	1236.47	4
C	225.1	5
A* (-2 to 89 °C)	1.37294	5
B*	1160.15	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. A° consts. B°		
t_e °C	79.49	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1807	5
BP	0.04106	4
t_e	0.03498	5
30 mm	0.5808	5
ΔHm cal/g		
ΔHv cal/g 25°C	96.88	5
30 mm	101.84	5
BP	88.32	5
t_e	87.17	5
t_e (d, e)	87.16	5
ΔHv/T_e	20.30	5
d (-2 to 79 °C)	101.41	5
e	0.1793	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9901	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9493	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.89	5
30	18.76	5
40	17.65	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt. u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 14

NAME	1, cis-4-Hexadiene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140	CH_2=CH CH_2CH=CH CH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	65.	2
100	13.80	5
30	-8.88	5
10	-26.15	5
1	-54.71	5
Pressure mm 25°C	167.20	5
t_e	908.62	5
Density g/ml 20°C	0.700	2
d_4^t 25	0.695	2
30	0.690	4
a	0.7200	4
b	-0.0397	4
Ref. Index n_D 20°C	1.415	2
25	1.412	2
30	1.409	4
"C"	0.7888	4
MR (Obs.)	29.385	4
MR (Calc.)	28.974	5
(nD-d/2)	1.065	2
Dielectric	2.00	5
A (-9 to 108 °C)	7.01701	4
B	1206.11	4
C	226.6	5
A* (-9 to 81 °C)	1.37095	5
B*	1131.31	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	70.57	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1363	5
BP	0.04028	4
t_e	0.03499	5
30 mm	0.5689	5
ΔHm cal/g		
ΔHv cal/g 25°C	92.97	5
30 mm	99.03	5
BP	85.91	5
t_e	84.95	5
t_e (d, e)	84.93	5
ΔHv/T_e	20.30	5
d (-9 to 71 °C)	97.45	5
e	0.1774	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9860	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9500	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	19.31	5
30	18.19	5
40	17.10	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 15

NAME	1, trans-4-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	CH_2=CHCH_2CH=CHCH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	65.	2
100	13.80	5
30	-8.88	5
10	-26.15	5
1	-54.71	5
Pressure mm 25°C	167.20	5
t_e	909.69	5
Density g/ml 20°C	0.700	2
d_4^t 25	0.695	2
30	0.6900	4
a	0.7200	4
b	-0.0_397	4
Ref. Index n_D 20°C	1.415	2
25	1.412	2
30	1.409	4
"C"	0.7888	4
MR (Obs.)	29.385	4
MR (Calc.)	28.974	5
(nD-d/2)	1.065	2
Dielectric	2.00	5
A (-9 to 108 °C)	7.01701	4
B	1206.11	4
C	226.6	5
A* (-9 to 81 °C)	1.36916	5
B*	1130.92	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	70.61	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1363	5
BP	0.04028	4
t_e	0.03496	5
30 mm	0.5689	5
ΔHm cal/g		
ΔHv cal/g 25°C	93.02	5
30 mm	99.03	5
BP	86.00	5
t_e	85.03	5
t_e (d, e)	85.02	5
ΔHv/T_e	20.31	5
d (-9 to 71 °C)	97.46	5
e	0.1762	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9866	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9510	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	19.31	5
30	18.19	5
40	17.10	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	1,5-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_2=CH(CH_2)_2CH=CH_2$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	59.46	2
100	8.95	5
30	-13.43	5
10	-30.44	5
1	-58.59	5
Pressure mm 25°C	208.01	5
t_e	893.84	5
Density g/ml 20°C	0.6923	2
d_4^t 25	0.6878	2
30	0.6833	4
a	0.7104	4
b	-0.0_386	4
Ref. Index n_D 20°C	1.4042	2
25	1.4010	2
30	1.3978	4
"C"	0.7780	4
MR (Obs.)	29.030	4
MR (Calc.)	28.974	5
(nD-d/2)	1.0580	2
Dielectric	1.97	5
A (-13 to 102°C)	7.00740	4
B	1184.99	4
C	227.7	5
A* (-13 to 74°C)	1.36628	5
B*	1110.81	5
K		
c		
t_k / t_x (to °C)		
A' / B' / C' (to °C)		
A'* / B'* (to °C)		
Ac / Bc / Cc (t_c to °C)		
Cryos. consts. A° / B°		
t_e °C	64.45	5

		Ref.
dt/dP °C/mm 25°C	0.1125	5
BP	0.03976	4
t_e	0.03499	5
30 mm	0.5609	5
ΔHm cal/g		
ΔHv cal/g 25°C	90.27	5
30 mm	97.02	5
BP	84.29	5
t_e	83.44	5
t_e (d, e)	83.42	5
ΔHv/T_e	20.30	5
d (-13 to 64°C)	94.68	5
e	0.1746	5
d' / e' (to °C)		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9834	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9515	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v (to °C)		
(B^v) / (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f / g / h (to °K)		
f' / g' / h' (to °K)		
m / n / o (to °K)		
m' / n' / o' (to °K)		
Surface tension dynes/cm. γ 20°C	18.46	5
30	17.47	5
40	16.50	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 17

NAME	2,3-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_3CH{=}C{=}CHCH_2CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	68.0	2
100	16.42	5
30	-6.45	5
10	-23.85	5
1	-52.65	5
Pressure mm 25°C	148.45	5
t_e	918.28	5
Density g/ml 20°C	0.680	2
d_4^t 25	0.675	2
30	0.670	4
a	0.7000	4
b	-0.0_397	4
Ref. Index n_D 20°C	1.395	2
25	1.392	2
30	1.389	4
"C"	0.7750	4
MR (Obs.)	28.95	4
MR (Calc.)	28.974	5
(nD-d/2)	1.055	2
Dielectric	1.95	5
A (-6 to 110 °C)	7.02235	4
B	1218.02	4
C	226.1	5
A* (-6 to 84 °C)	1.37077	5
B*	1142.22	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	73.95	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1514	5
BP	0.04057	4
t_e	0.03495	5
30 mm	0.5734	5
ΔHm cal/g		
ΔHv cal/g 25°C	94.47	5
30 mm	100.07	5
BP	86.90	5
t_e	85.86	5
t_e (d, e)	85.85	5
ΔHv/T_e	20.32	5
d (-6 to 74 °C)	98.93	5
e	0.1769	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9881	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9507	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	17.20	5
30	16.18	5
40	15.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 18

NAME	cis-2, cis-4-Hexadiene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140
			$CH_3CH=CHCH=CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	80.	2
100	26.89	5
30	3.32	5
10	-14.62	5
1	-44.34	5
Pressure mm 25°C	91.55	5
t_e	953.22	5
Density g/ml 20°C	0.720	2
d^t_4 25	0.715	2
30	0.710	4
a	0.7400	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.450	2
25	1.447	2
30	1.444	4
"C"	0.8277	4
MR (Obs.)	30.658	4
MR (Calc.)	30.244	5
(nD-d/2)	1.090	2
Dielectric	2.10	5
A 3 to 128 °C	7.03864	4
B	1263.15	4
C	223.8	5
A* 3 to 97 °C	1.37195	5
B*	1184.88	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	87.36	5

		Ref.
dt/dP °C/mm 25°C	0.2325	5
BP	0.04175	4
t_e	0.03492	5
30 mm	0.5912	5
ΔHm cal/g		
ΔHv cal/g 25°C	100.38	5
30 mm	104.30	5
BP	90.57	5
t_e	89.28	5
t_e (d, e)	89.25	5
$\Delta Hv/T_e$	20.34	5
d 3 to 87 °C	104.90	5
e	0.1791	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9937	5
30 mm	1.0000	5
BP	0.9565	5
t_e	0.9502	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.65	5
30	20.45	5
40	19.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 19

NAME	cis-2, trans-4-Hexadiene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}
Molecular Weight 82.140		$CH_3CH=CH\,CH=CH\,CH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	80.	2
100	26.89	5
30	3.32	5
10	-14.62	5
1	-44.34	5
Pressure mm 25°C	91.55	5
t_e	950.95	5
Density g/ml 20°C	0.720	2
d^t_4 25	0.715	2
30	0.710	4
a	0.7400	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.450	2
25	1.447	2
30	1.444	4
"C"	0.8277	4
MR (Obs.)	30.658	4
MR (Calc.)	30.244	5
(nD-d/2)	1.090	2
Dielectric	2.10	5
A (3 to 127 °C)	7.03864	4
B	1263.15	4
C	223.8	5
A* (3 to 97 °C)	1.37555	5
B*	1185.70	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	87.28	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2325	5
BP	0.04175	4
t_e	0.03498	5
30 mm	0.5912	5
ΔHm cal/g		
ΔHv cal/g 25°C	100.31	5
30 mm	104.30	5
BP	90.38	5
t_e	89.10	5
t_e (d, e)	89.06	5
$\Delta Hv/T_e$	20.30	5
d (3 to 87 °C)	104.90	5
e	0.1816	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9930	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9481	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.65	5
30	20.45	5
40	19.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 20

NAME	trans-2, trans-4-Hexadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_3CH{=}CHCH{=}CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	80.	2
100	26.89	5
30	3.32	5
10	-14.62	5
1	-44.34	5
Pressure mm 25°C	91.55	5
t_e	950.95	5
Density g/ml 20°C	0.720	2
d^t_4 25	0.715	2
30	0.710	4
a	0.7400	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.450	2
25	1.447	2
30	1.444	4
"C"	0.8277	4
MR (Obs.)	30.658	4
MR (Calc.)	30.244	5
(nD-d/2)	1.090	2
Dielectric	2.10	5
A (3 to 127 °C)	7.03864	4
B	1263.15	4
C	223.8	5
A* (3 to 97 °C)	1.37555	5
B*	1185.70	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (t_c) °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	87.28	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2325	5
BP	0.04175	4
t_e	0.03498	5
30 mm	0.5912	5
ΔHm cal/g		
ΔHv cal/g 25°C	100.31	5
30 mm	104.30	5
BP	90.38	5
t_e	89.10	5
t_e (d, e)	89.06	5
$\Delta Hv/T_e$	20.30	5
d (3 to 87 °C)	104.90	5
e	0.1816	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9930	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9481	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.65	5
30	20.45	5
40	19.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 21

NAME	3-Methyl-1,2-pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	CH_2=C=C CH_2CH_3 (with CH_3 on C3)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	70.	2
100	18.17	5
30	-4.82	5
10	-22.31	5
1	-51.26	5
Pressure mm 25°C	137.1	5
t_e	922.4	5
Density g/ml 20°C	0.715	2
d^t_4 25	0.710	2
30	0.705	4
a	0.7350	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.425	2
25	1.422	2
30	1.419	4
"C"	0.7898	4
MR (Obs.)	29.375	4
MR (Calc.)	28.974	5
(nD-d/2)	1.068	2
Dielectric	2.03	5
A (-5 to 116 °C)	7.02488	4
B	1225.40	4
C	225.7	5
A* (-5 to 86 °C)	1.37362	5
B*	1149.83	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	76.12	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1625	5
BP	0.04077	4
t_e	0.0350	5
30 mm	0.5764	5
ΔHm cal/g		
ΔHv cal/g 25°C	95.38	5
30 mm	100.78	5
BP	87.38	5
t_e	86.30	5
t_e (d, e)	86.28	5
ΔHv/T_e	20.29	5
d (-5 to 76 °C)	99.91	5
e	0.1791	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9884	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9490	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.03	5
30	19.85	5
40	18.69	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 22

NAME	4-Methyl-1, 2-pentadiene
STRUCTURAL FORMULA	$CH_2=C=CHCH(CH_3)CH_3$
Mole % Pur.	
Ref.	
Molecular Formula	C_6H_{10}
Molecular Weight	82.140

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	70.	2
100	18.17	5
30	-4.82	5
10	-22.31	5
1	-51.26	5
Pressure mm 25°C	137.08	5
t_e	922.91	5
Density g/ml 20°C	0.708	2
d_4^t 25	0.703	2
30	0.698	4
a	0.7280	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.424	2
25	1.421	2
30	1.418	4
"C"	0.7959	4
MR (Obs.)	29.604	4
MR (Calc.)	28.974	5
(nD-d/2)	1.070	2
Dielectric	2.03	5
A (-5 to 115°C)	7.02488	4
B	1225.40	4
C	225.7	5
A* (-5 to 86°C)	1.37272	5
B*	1149.63	5
K		
c		
t_k to		
t_x °C		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	76.14	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1625	5
BP	0.04077	4
t_e	0.03498	5
30 mm	0.5764	5
ΔHm cal/g		
ΔHv cal/g 25°C	95.40	5
30 mm	100.78	5
BP	87.42	5
t_e	86.35	5
t_e (d, e)	86.32	5
$ΔHv/T_e$	20.30	5
d (-5 to 76 °C)	99.92	5
e	0.1785	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9886	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9495	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.22	5
30	19.07	5
40	17.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	2-Methyl-1, cis-3-pentadiene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140	CH_2=C CH=CH CH_3 (C bears CH_3)

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	76.	2
100	23.40	5
30	0.64	5
10	-17.70	5
1	-47.11	5
Pressure mm 25°C	107.71	5
t_e	940.07	5
Density g/ml 20°C	0.719	2
d_4^t 25	0.714	2
30	0.709	4
a	0.7390	4
b	$-0.0_3 98$	4
Ref. Index n_D 20°C	1.446	2
25	1.443	2
30	1.440	4
"C"	0.8219	4
MR (Obs.)	30.465	4
MR (Calc.)	30.244	5
(nD-d/2)	1.087	2
Dielectric	2.09	5
A (1 to 123 °C)	7.03380	4
B	1248.39	4
C	224.6	5
A* (1 to 93 °C)	1.37445	5
B*	1171.46	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	82.84	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2012	5
BP	0.04136	4
t_e	0.03497	5
30 mm	0.5853	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.35	5
30 mm	102.88	5
BP	89.22	5
t_e	88.03	5
t_e (d, e)	87.99	5
ΔHv/T_e	20.31	5
d (1 to 83 °C)	102.89	5
e	0.1799	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9915	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9490	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.52	5
30	20.32	5
40	19.16	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. 1. %/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	2-Methyl-1, trans-3-pentadiene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140 / $CH_2=C(CH_3)CH=CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	76.	2
100	23.40	5
30	0.06	5
10	-17.70	5
1	-47.11	5
Pressure mm 25°C	107.71	5
t_e	939.51	5
Density g/ml 20°C	0.719	2
d^t_4 25	0.714	2
30	0.709	4
a	0.7390	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.446	2
25	1.443	2
30	1.440	4
"C"	0.8219	4
MR (Obs.)	30.465	4
MR (Calc.)	30.244	5
(nD-d/2)	1.087	2
Dielectric	2.09	5
A (0 to 123 °C)	7.03380	4
B	1248.39	4
C	224.6	5
A* (0 to 93 °C)	1.37535	5
B*	1171.66	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to		
B'* °C		
Ac (t_c) to °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	82.82	5

		Ref.
dt/dP °C/mm 25°C	0.2012	5
BP	0.04136	4
t_e	0.03499	5
30 mm	0.5853	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.33	5
30 mm	102.88	5
BP	89.17	5
t_e	87.98	5
t_e (d, e)	87.94	5
$\Delta Hv/T_e$	20.30	5
d (0 to 83 °C)	102.89	5
e	0.1805	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9913	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9485	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	21.52	5
30	20.32	5
40	19.16	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	3-Methyl-1, cis-3-pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_2=CHC(CH_3)=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	77.	2
100	24.27	5
30	0.88	5
10	-16.93	5
1	-46.42	5
Pressure mm 25°C	103.43	5
t_e	942.37	5
Density g/ml 20°C	0.735	2
d^t_4 25	0.730	2
30	0.725	4
a	0.7550	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.452	2
25	1.449	2
30	1.446	4
"C"	0.8142	4
MR (Obs.)	30.148	4
MR (Calc.)	30.244	5
(nD-d/2)	1.085	2
Dielectric	2.11	5
A (1 to 126 °C)	7.03502	4
B	1252.08	4
C	224.4	5
A* (1 to 94 °C)	1.37541	5
B*	1175.17	5
K		
c		
t_k t_x to °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	83.93	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2086	5
BP	0.04145	4
t_e	0.03499	5
30 mm	0.5868	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.83	5
30 mm	103.24	5
BP	89.50	5
t_e	88.26	5
t_e (d, e)	88.25	5
ΔHv/T_e	20.30	5
d (1 to 84 °C)	103.39	5
e	0.1804	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9917	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9484	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	23.51	5
30	22.23	5
40	20.98	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 26

NAME	3-Methyl-1, trans-3-pentadiene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140	$CH_2=CHC(CH_3)=CHCH_3$

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	77.	2
100	24.27	5
30	0.88	5
10	-16.93	5
1	-46.42	5
Pressure mm 25°C	103.43	5
t_e	942.37	5
Density g/ml 20°C	0.735	2
d^t_4 25	0.730	2
30	0.725	4
a	0.7550	4
b	-0.0398	4
Ref. Index n_D 20°C	1.452	2
25	1.449	2
30	1.446	4
"C"	0.8142	4
MR (Obs.)	30.148	4
MR (Calc.)	30.244	5
(nD-d/2)	1.085	2
Dielectric	2.11	5
A 1 to 126 °C	7.03502	4
B	1252.08	4
C	224.4	5
A* 1 to 94 °C	1.37541	5
B*	1175.17	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	83.93	5

		Ref.
dt/dP °C/mm 25°C	0.2086	5
BP	0.04145	4
t_e	0.03499	5
30 mm	0.5868	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.83	5
30 mm	103.24	5
BP	89.50	5
t_e	88.26	5
t_e (d,e)	88.25	5
ΔHv/T_e	20.30	5
d 1 to 84 °C	103.39	5
e	0.1804	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9917	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9484	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) to (A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	23.51	5
30	22.23	5
40	20.98	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	4-Methyl-1, 3-pentadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	CH_2=CHCH=C(CH_3)CH_3

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	76.3	2
100	23.66	5
30	0.31	5
10	-17.47	5
1	-46.91	5
Pressure mm 25°C	106.42	5
t_e	940.37	5
Density g/ml 20°C	0.719	2
d_4^t 25	0.714	2
30	0.709	4
a	0.7390	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.451	2
25	1.448	2
30	1.445	4
"C"	0.8306	4
MR (Obs.)	30.760	4
MR (Calc.)	30.244	5
(nD-d/2)	1.092	2
Dielectric	2.10	5
A (0 to 123 °C)	7.03324	4
B	1249.05	4
C	224.5	5
A* (0 to 93 °C)	1.37449	5
B*	1172.30	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	83.15	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.2034	5
BP	0.04139	4
t_e	0.03499	5
30 mm	0.5857	5
ΔHm cal/g		
ΔHv cal/g 25°C	98.47	5
30 mm	102.99	5
BP	89.26	5
t_e	88.06	5
t_e (d, e)	88.02	5
ΔHv/T_e	20.30	5
d (0 to 83 °C)	103.04	5
e	0.1806	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9914	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9485	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	21.52	5
30	20.32	5
40	19.16	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+]		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	2-Methyl-1,4-pentadiene	STRUCTURAL FORMULA
		$CH_2=C(CH_3)CH_2CH=CH_2$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_6H_{10}	82.140

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	56.	2
100	5.95	5
30	-16.22	5
10	-33.07	5
1	-60.96	5
Pressure mm 25°C	237.83	5
t_e	884.46	5
Density g/ml 20°C	0.694	2
d_4^t 25	0.689	2
30	0.684	4
a	0.7141	4
b	-0.0396	4
Ref. Index n_D 20°C	1.405	2
25	1.402	2
30	1.399	4
"C"	0.7775	4
MR (Obs.)	29.009	4
MR (Calc.)	28.974	5
(nD-d/2)	1.058	2
Dielectric	1.97	5
A (-16 to 98 °C)	7.00507	4
B	1172.94	4
C	228.4	5
A* (-16 to 71 °C)	1.36730	5
B*	1099.20	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	60.61	5

		Ref.
dt/dP °C/mm 25°C	0.1000	5
BP	0.03940	4
t_e	0.03496	5
30 mm	0.5557	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.68	5
30 mm	95.84	5
BP	83.34	5
t_e	82.56	5
t_e (d, e)	82.54	5
ΔHv/T_e	20.31	5
d (-16 to 61 °C)	93.04	5
e	0.1731	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9816	5
30 mm	1.0000	5
BP	0.9565	5
t_e	0.9523	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	18.63	5
30	17.53	5
40	16.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 29

NAME	3-Methyl-1,4-pentadiene	STRUCTURAL FORMULA
		CH_2=CHCHCH=CH_2 CH_3 (on the central CH)

Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	55.	2
100	5.08	5
30	-17.02	5
10	-33.83	5
1	-61.64	5
Pressure mm 25°C	247.21	5
t_e	881.08	5
Density g/ml 20°C	0.695	2
d^t_4 25	0.690	2
30	0.685	4
a	0.7151	4
b	-0.0₃96	4
Ref. Index n_D 20°C	1.405	2
25	1.402	2
30	1.399	4
"C"	0.7764	4
MR (Obs.)	28.967	4
MR (Calc.)	28.974	5
(nD-d/2)	1.058	2
Dielectric	1.97	5
A -17 to	7.00219	4
B 97 °C	1168.41	4
C	228.5	5
A* -17 to	1.36668	5
B* 69 °C	1095.11	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	59.49	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0966	5
BP	0.03930	4
t_e	0.03498	5
30 mm	0.5541	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.17	5
30 mm	95.51	5
BP	83.00	5
t_e	82.24	5
t_e (d, e)	82.23	5
ΔHv/T_e	20.30	5
d -17 to	92.55	5
e 59 °C	0.1736	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9806	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9519	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C γ	18.73	5
30	17.63	5
40	16.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+] Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	2-Methyl-2, 3-pentadiene		
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140

STRUCTURAL FORMULA

$CH_3C(CH_3)=C=CHCH_3$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	72.	2
100	19.91	5
30	-3.19	5
10	-20.77	5
1	-49.87	5
Pressure mm 25°C	126.53	5
t_e	928.63	5
Density g/ml 20°C	0.711	2
d^t_4 25	0.706	2
30	0.701	4
a	0.7310	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.425	2
25	1.422	2
30	1.419	4
"C"	0.7943	4
MR (Obs.)	29.540	4
MR (Calc.)	28.974	5
(nD-d/2)	1.070	2
Dielectric	2.03	5
A (-3 to 117°C)	7.02740	4
B	1232.78	4
C	225.3	5
A* (-3 to 88°C)	1.37287	5
B*	1156.64	5
K		
c		
t_k to t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	78.37	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1744	5
BP	0.04097	4
t_e	0.03498	5
30 mm	0.5793	5
ΔHm cal/g		
ΔHv cal/g 25°C	96.39	5
30 mm	101.48	5
BP	88.01	5
t_e	86.90	5
t_e (d, e)	86.87	5
$\Delta Hv/T_e$	20.30	5
d (-3 to 78 °C)	100.91	5
e	0.1792	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9896	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9494	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. γ 20°C	20.57	5
30	19.41	5
40	18.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	2-Ethyl-1, 3-butadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_2{=}C(C_2H_5)CH{=}CH_2$

Property	Value	Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	75.	2
100	22.53	5
30	-0.74	5
10	-18.46	5
1	-47.79	5
Pressure mm 25°C	112.14	5
t_e	936.65	5
Density g/ml 20°C	0.717	2
d^t_4 25	0.712	2
30	0.707	4
a	0.7370	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.445	2
25	1.442	2
30	1.439	4
"C"	0.8225	4
MR (Obs.)	30.490	4
MR (Calc.)	30.244	5
(nD-d/2)	1.086	2
Dielectric	2.09	5
A (0 to 121 °C)	7.03112	4
B	1243.85	4
C	224.7	5
A* (0 to 92 °C)	1.37396	5
B*	1167.37	5
K		
c		
t_k / t_x to °C		
A' / B' / C' to °C		
A'* / B'* to °C		
Ac / Bc / Cc to t_c °C		
Cryos. consts. A° / B°		
t_e °C	81.70	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1941	5
BP	0.04126	4
t_e	0.03499	5
30 mm	0.5837	5
ΔHm cal/g		
ΔHv cal/g 25°C	97.84	5
30 mm	102.55	5
BP	88.88	5
t_e	87.70	5
t_e (d, e)	87.67	5
$\Delta Hv/T_e$	20.30	5
d (0 to 82 °C)	102.41	5
e	0.1805	5
d' / e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9908	5
30 mm	1.0000	5
BP	0.9545	5
t_e	0.9486	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v / A^v to °C		
(B^v) / (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f / g / h to °K		
f' / g' / h' to °K		
m / n / o to °K		
m' / n' / o' to °K		
Surface tension dynes/cm. γ 20°C	21.28	5
30	20.09	5
40	18.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 32

NAME	2, 3-Dimethyl-1, 3-butadiene	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_6H_{10} / Molecular Weight 82.140	$CH_2=C(CH_3)-C(CH_3)=CH_2$

Property	Value	Ref.
F.P. °C	-76.005	2
F.P. 100%		
B.P. °C 760 mm	68.78	2
100	17.11	5
30	-5.79	5
10	-23.23	5
1	-52.08	5
Pressure mm 25°C	143.84	5
t_e	920.51	5
Density g/ml 20°C	0.7267	2
d^t_4 25	0.7222	2
30	0.7177	4
a	0.7447	4
b	-0.0387	4
Ref. Index n_D 20°C	1.4394	2
25	1.4362	2
30	1.4330	4
"C"	0.8019	4
MR (Obs.)	29.754	4
MR (Calc.)	30.244	5
(nD-d/2)	1.0760	2
Dielectric	2.07	5
A (-6 to 116°C)	7.02388	4
B	1220.88	4
C	225.9	5
A* (-6 to 85°C)	1.37143	5
B*	1144.96	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to °C		
Bc t_c		
Cc		
Cryos. consts. A°		
B°		
t_e °C	74.82	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.1557	5
BP	0.04064	4
t_e	0.03494	5
30 mm	0.5745	5
ΔHm cal/g		
ΔHv cal/g 25°C	94.89	5
30 mm	100.38	5
BP	87.18	5
t_e	86.14	5
t_e (d, e)	86.11	5
$\Delta Hv/T_e$	20.33	5
d (-6 to 75°C)	99.35	5
e	0.1770	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9885	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9507	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v) to °C		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	22.44	5
30	21.32	5
40	20.21	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.2	5
Exp. L.1.%/wt.		
u.		
Dispersion	225.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 1

NAME	Ethyne
	Acetylene

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_2H_2	26.036

STRUCTURAL FORMULA

CH≡CH

Property	Value	Ref.
F.P. °C	-80.8≠	2
F.P. 100%		
B.P. °C 760 mm	-84.0#	2
100	-108.3	2
30	-120.1	2
10	-129.5	2
1	-153.3	5
Pressure mm 25°C		
t_e	494.3	5
Density g/ml 20°C		
d^t_4 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	9.434	5
(nD-d/2)		
Dielectric		
A -81 to -60 °C	7.0949	2
B	709.1	2
C	253.2	2
A* -81 to -60 °C	1.60062	5
B*	676.6	5
K		
c		
t_k t_x to °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	-89.6	5

Property	Value	Ref.
dt/dP °C/mm 25°C		
BP	0.018	2
t_e	0.02582	5
30 mm	0.3036	5
ΔHm cal/g		
ΔHv cal/g[a] 25°C		
30 mm	196.37	5
BP	193.46	5
t_e	195.04	5
t_e (d, e)		
ΔHv/T_e		
d e to °C		
d' e' to °C		
d_c g/ml	0.231	2
v_c ml/g	4.329	2
t_c °C	36.3	2
P_c mm	46816.	2
PV/RT 25°C		
30 mm	1.0000	5
BP	0.9700	5
t_e	0.9778	5
t_c	0.273	5
ΔHc kcal/m	300.10	2
ΔHf	54.194	2
ΔFf	50.000	2
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. 300°K	10.532	2
400	11.973	2
c_p vap. 300°K	0.40452	2
400	0.45986	2
c_v vap.		

Property	Range	Value	Ref.
f g h	to °K		
f' g' h'	to °K		
m	300 to 600 °K	0.1355	4
n		0.0012	4
o		$-0.0_{6}86$	4
m'	700 to 1000 °K	0.3444	4
n'		$0.0_{3}37$	4
o'		$-0.0_{7}98$	4
Surface tension dynes/cm. γ 20°C			
30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		90.4	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
A^s		9.1363	2
B^s		1230.3	2
C^s		280.7	2
A^{*s}		3.1388	5
B^{*s}		1160.71	5

≠ Saturation press (triple pt.) # Sublimation point + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

[a] Heat of sublimation

No. 2

NAME	Propyne	STRUCTURAL FORMULA
	Methylacetylene	$CH_3C{\equiv}CH$
Mole % Pur.	Ref.	Molecular Formula C_3H_4 — Molecular Weight 40.062

Property	Value	Ref.
F.P. °C	-102.7	2
F.P. 100%		
B.P. °C 760 mm	-23.22	2
100	-61.1	2
30	-78.2	2
10	-90.2	2
1	-110.6	5
Pressure mm 25°C		
t_e	666.5	5
Density g/ml 20°C, d_4^t 25, 30		
a, b		
Ref. Index n_D 20°C, 25, 30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	14.052	5
Dielectric		
A (-78 to 24 °C)	6.77915	2
B	801.91	2
C	228.93	2
A* (-78 to -16 °C)	0.89250	5
B*	738.2	5
K, c, t_k, t_x (to °C)		
A', B', C' (to °C)		
A'*, B'* (to °C)		
Ac, Bc, Cc (t_c °C)		
Cryos. consts. A°, B°		
t_e °C	-26.2	5

Property	Value	Ref.
dt/dP °C/mm 25°C		
BP	0.0301	2
t_e	0.0334	5
30 mm	0.413	5
ΔHm cal/g		
ΔHv cal/g 25°C		
30 mm	152.2	5
BP	131.0	5
t_e	131.9	5
t_e (d, e)	132.15	5
$\Delta Hv/T_e$	21.39	5
d (-78 to -30 °C)	122.05	5
e	0.3856	5
d', e' (to °C)		
d_c g/ml	0.229	5
v_c ml/g	4.367	5
t_c °C	121.6	2
P_c mm	38000.	5
PV/RT 25°C		
30 mm	1.0000	5
BP	0.9700	5
t_e	0.9699	5
t_c	0.270	5
ΔHc kcal/m	442.07	2
ΔHf	44.319	2
ΔFf	46.313	2
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36319	2
400	0.43258	2
c_v vap.		

Property	Value	Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m (300 to 600 °K)	0.0996	4
n	0.0010	4
o	$-0.0_{6}46$	4
m' (700 to 1000 °K)	0.1830	4
n'	$0.0_{3}74$	4
o'	$-0.0_{6}24$	4
Surface tension dynes/cm. γ 20°C, 30, 40		
Parachor [P] 20°C, 30, 40		
Sugd.	129.4	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in[+] Acetone, Carbon tet., Benzene, Ether, n-Heptane, Ethanol, Water, Water in		

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 3

NAME	1-Butyne	STRUCTURAL FORMULA
	Ethylacetylene	$C_2H_5C{\equiv}CH$
Mole % Pur. / Ref.	Molecular Formula C_4H_6	Molecular Weight 54.088

		Ref.
F.P. °C	-125.720	2
F.P. 100%		
B.P. °C 760 mm	8.09	2
100	-34.56	2
30	-53.42	2
10	-67.75	2
1	-91.42	5
Pressure mm 25°C		
t_e	758.4	5
Density g/ml 20°C	0.65≠	2
d_4^t 25	0.65≠	2
30	0.65	4
a	0.6511	5
b	0.0_3129	5
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A (-67 to 63 °C)	6.97497	2
B	986.46	2
C	232.85	2
A* (-60 to 18 °C)	1.20441	5
B*	920.64	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C		

		Ref.
dt/dP °C/mm 25°C	0.0208	5
BP	0.0336	5
t_e	0.0337	5
30 mm	0.4724	5
ΔHm cal/g		
ΔHv cal/g 25°C	105.61	5
30 mm	125.13	5
BP	109.82	5
t_e	109.82	5
t_e (d,e)		
ΔHv/T_e	21.12	5
d (-60 to 30 °C)	111.83	5
e	0.2489	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C		
30 mm		
BP		
t_e		
t_c		
ΔHc kcal/m	589.08	2
ΔHf	39.48	2
ΔFf	48.30	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	16.40	5
30	16.25	5
40	16.03	5
Parachor [P] 20°C		
30		
40		
Sugd.		
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ ≠ at saturation pressure + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 4

NAME	2-Butyne	STRUCTURAL FORMULA
	Dimethylacetylene	$CH_3C{\equiv}C\ CH_3$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		C_4H_6	54.088

Property	Value	Ref.
F.P. °C	-32.260	2
F.P. 100%		
B.P. °C 760 mm	26.97	2
100	-18.7	2
30	-38.98	2
10	-54.46	2
1	-80.0	5
Pressure mm 25°C	706.6	5
t_e	808.6	5
Density g/ml 20°C	0.6910	2
d_4^t 25	0.6856	2
30	0.6801	4
a	0.7130	4
b	-0.00101	4
Ref. Index n_D 20°C	1.3921	2
25	1.3893	2
30	1.3865	4
"C"	0.7574	4
MR (Obs.)	18.64	2
MR (Calc.)	18.670	5
(nD-d/2)	1.0466	2
Dielectric		
A -32 to	7.07871	2
B 91°C	1104.72	2
C	236.19	2
A* -32 to	1.28120	5
B* 39°C	1032.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 91 to	7.34794	5
Bc t_c °C	1354.8	5
Cc	277.8	5
Cryos. A°		
consts. B°		
t_e °C	28.65	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0379	5
BP	0.0358	5
t_e	0.0341	5
30 mm	0.5097	5
ΔHm cal/g		
ΔHv cal/g 25°C	117.43	5
30 mm	131.8	5
BP	117.03	5
t_e	116.5	5
t_e (d, e)	116.65	5
$\Delta Hv/T_e$	20.87	5
d -40 to	123.07	5
e 35 °C	0.224	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	212.	5
P_c mm	38478.	5
PV/RT 25°C	0.9653	5
30 mm	1.0000	5
BP	0.9650	5
t_e	0.9628	5
t_c		
ΔHc kcal/m	584.57	2
ΔHf	34.97	2
ΔFf	44.32	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °C		
c_p vap. 300°K	0.34573	2
400	0.41821	2
c_v vap.		

Property	Value	Ref.
f to		
g °C		
h		
f' to		
g' °C		
h'		
m 300 to	0.1082	4
n 600 °K	$0.0_{3}84$	4
o	$-0.0_{6}17$	4
m' 700 to	0.1020	4
n' 1000 °K	$0.0_{3}93$	4
o'	$-0.0_{6}30$	4
Surface tension dynes/cm. γ 20°C	21.19	5
30	19.80	5
40	18.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	168.4	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_C$ ≠ solid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	1-Pentyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$CH{\equiv}C(CH_2)_2CH_3$
Molecular Formula	C_5H_8	
Molecular Weight	68.114	

Property	Value	Ref.
F.P. °C	-105.7	2
F.P. 100%		
B.P. °C 760 mm	40.18	2
100	-7.	2
30	-28.	2
10	-44.	2
1	-70.	5
Pressure mm 25°C	431.4	4
t_e	851.4	5
Density g/ml 20°C	0.6901	2
d_4^t 25	0.6849	2
30		
a		
b		
Ref. Index n_D 20°C	1.3852	2
25	1.3826	2
30		
"C"		
MR (Obs.)	23.14	2
MR (Calc.)		
(nD-d/2)	1.0402	2
Dielectric		
A -50 to 70°C	6.97263	2
B	1095.42	2
C	227.53	2
A* -50 to 50°C	1.25625	5
B*	1022.54	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	43.45	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0586	5
BP	0.0374	5
t_e	0.0342	5
30 mm	0.5251	5
ΔHm cal/g		
ΔHv cal/g 25°C	100.63	5
30 mm	111.13	5
BP	97.28	5
t_e	96.62	5
t_e (d, e)	96.63	5
$\Delta Hv/T_e$	20.78	5
d -50 to 50 °C	105.42	5
e	0.2024	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	0.9810	5
30 mm	1.0000	5
BP	0.9693	5
t_e	0.9666	5
t_c		
ΔHc kcal/m	735.95	2
ΔHf	34.50	2
ΔFf	50.16	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37114	2
400	0.45409	2
c_v vap.		

Property	Range	Value	Ref.
f	to °K		
g			
h			
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0650	4
n		0.0012	4
o		$-0.0_{6}48$	4
m'	700 to 1000 °K	0.1410	4
n'		$0.0_{3}94$	4
o'		$-0.0_{6}32$	4
Surface tension dynes/cm. γ 20°C		19.34	5
30		18.13	5
40		16.94	5
Parachor [P] 20°C			
30			
40			
Sugd.		207.4	5
Exp. L.1.%/wt.			
u.			
Dispersion		119.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 6

NAME	2-Pentyne	STRUCTURAL FORMULA
		$C_2H_5C{\equiv}CCH_3$
Mole % Pur.	Ref.	Molecular Formula C_5H_8	Molecular Weight 68.114

		Ref.
F.P. °C	-109.3	2
F.P. 100%		
B.P. °C		
760 mm	56.07	2
100	6.20	2
30	-16.0	2
10	-32.8	2
1	-61.	5
Pressure mm 25°C	235.8	5
t_e	898.4	5
Density g/ml 20°C	0.7107	2
d_4^t 25	0.7055	2
30	0.7003	4
a	0.7316	4
b	-0.00101	4
Ref. Index n_D 20°C	1.4039	2
25	1.4009	2
30	1.3979	4
"C"	0.7573	4
MR (Obs.)	23.43	2
MR (Calc.)	23.288	5
(nD-d/2)	1.0485	2
Dielectric	1.97	5
A (-19 to 113°C)	7.05189	2
B	1193.05	2
C	229.96	2
A* (-19 to 71°C)	1.30669	5
B*	1113.17	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac (113 to t_c °C)	7.22935	5
Bc	1424.6	5
Cc	272.6	5
Cryos. consts. A°		
B°		
t_e °C	61.14	5

		Ref.
dt/dP °C/mm		
25°C	0.1003	5
BP	0.0392	5
t_e	0.0343	5
30 mm	0.556	5
ΔHm cal/g		
ΔHv cal/g		
25°C	108.5	5
30 mm	115.58	5
BP	102.6	5
t_e	101.66	5
t_e (d, e)	101.7	5
ΔHv/T_e	20.71	5
d (-19 to 65 °C)	112.7	5
e	0.1802	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	241.	5
P_c mm	28675.	5
PV/RT		
25°C	0.9901	5
30 mm	1.0000	5
BP	0.9700	5
t_e	0.9663	5
t_c		
ΔHc kcal/m	732.25	2
ΔHf	30.80	2
ΔFf	46.41	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.34780	2
400	0.42869	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m (300 to 600 °K)	0.0691	4
n	0.0010	4
o	$-0.0_{6}30$	4
m' (700 to 1000 °K)	0.1628	4
n'	$0.0_{3}81$	4
o'	$-0.0_{6}22$	4
Surface tension dynes/cm. γ 20°C	21.84	5
30	20.54	5
40	19.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	207.4	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c — + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	3-Methyl-1-butyne		STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula C_5H_8	Molecular Weight 68.114	$CH_3(CH_2)_2C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-89.7	2
F.P. 100%		
B.P. °C 760 mm	26.35	2
100	-19.4	4
30	-39.5	4
10	-55.	5
1		
Pressure mm 25°C	723.4	4
t_e	799.8	5
Density g/ml 20°C	0.666	2
d^t_4 25	0.660	2
30	0.654	4
a	0.691	4
b	-0.001	4
Ref. Index n_D 20°C	1.3723	2
25	1.3695	2
30	1.3667	4
"C"	0.7482	4
MR (Obs.)	23.261	2
MR (Calc.)	23.288	5
(nD-d/2)	1.039	2
Dielectric	1.88	5
A -40 to 73 °C	6.88971	5
B	1017.50	5
C	227.46	5
A* -40 to 38 °C	1.21594	5
B*	952.8	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 73 to t_c °C	7.34037	5
Bc	1329.4	5
Cc	272.6	5
Cryos. consts. A°		
B°		
t_e °C	27.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.0376	5
BP	0.0362	5
t_e	0.0348	5
30 mm	0.4974	5
ΔHm cal/g		
ΔHv cal/g 25°C	91.0	5
30 mm	106.8	5
BP	90.63	5
t_e	90.26	5
t_e (d, e)	90.29	5
ΔHv/T_e	20.43	5
d -40 to 28 °C	97.10	5
e	0.2455	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	188.	5
P_c mm	28529.	5
PV/RT 25°C	0.9578	5
30 mm	1.0000	5
BP	0.9566	5
t_e	0.9549	5
t_c		
ΔHc kcal/m	734.05	2
ΔHf	32.60	2
ΔFf	49.12	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.36894	2
400	0.45659	2
c_v vap.		

Property		Value	Ref.
f, g to °K			
h			
f', g' to °K			
h'			
m	300 to 600 °K	0.0293	4
n		0.0013	4
o		-0.0_664	4
m'	700 to 1000 °K	0.1145	4
n'		0.0010	4
o'		-0.0_637	4
Surface tension dynes/cm. γ 20°C		16.67	5
30		15.41	5
40		14.17	5
Parachor [P] 20°C			
30			
40			
Sugd.		207.4	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in[+] Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

T_R = 0.75 T_c

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1-Hexyne			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140	$C_4H_9C{\equiv}CH$

		Ref.
F.P. °C	-131.9	2
F.P. 100%		
B.P. °C 760 mm	71.33	2
100	18.2	4
30	-5.2	4
10	-22.9	5
1	-52.2	5
Pressure mm 25°C	136.05	5
t_e	925.6	5
Density g/ml 20°C	0.7155	2
d_4^t 25	0.7106	2
30	0.7057	4
a	0.7351	4
b	-0.0_396	4
Ref. Index n_D 20°C	1.3989	2
25	1.3960	2
30	1.3931	4
"C"	0.7435	4
MR (Obs.)	27.76	2
MR (Calc.)	27.906	5
(nD-d/2)	1.0412	2
Dielectric	1.96	5
A -8 to	6.91212	5
B 118 °C	1194.6	5
C	225.	5
A* -8 to	1.26142	5
B* 88 °C	1119.4	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 118 to	7.16827	5
Bc t_c °C	1453.8	5
Cc	268.5	5
Cryos. A°		
consts. B°		
t_e °C	77.76	5

		Ref.
dt/dP °C/mm		
25°C	0.1670	5
BP	0.042	2
t_e	0.0360	5
30 mm	0.5854	5
ΔHm cal/g		
ΔHv cal/g 25°C	93.6	5
30 mm	98.94	5
BP	85.40	5
t_e	84.3	5
t_e (d, e)	84.27	5
ΔHv/T_e	19.73	5
d -8 to	98.02	5
e 78 °C	0.1769	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	248.	5
P_c mm	22734.	5
PV/RT 25°C	0.9913	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9479	5
t_c		
ΔHc kcal/m	882.85	2
ΔHf	29.55	2
ΔFf	52.17	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.37460	2
400	0.46104	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to	0.0576	4
n 600 °K	0.0012	4
o	-0.0_648	4
m' 700 to	0.1451	4
n' 1000 °K	0.0_396	4
o'	-0.0_632	4
Surface tension dynes/cm. γ 20°C	21.16	5
30	19.99	5
40	18.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	246.4	5
Exp. L.1.%/wt. u.		
Dispersion	115.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	1-Heptyne			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166	$C_5H_{11}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-80.9	2
F.P. 100%		
B.P. °C 760 mm	99.74	2
100	39.63	4
30	13.56	4
10	-6.0	5
1	-38.0	5
Pressure mm 25°C	52.51	5
t_e	1017.9	5
Density g/ml 20°C	0.7328	2
d^t_4 25	0.7283	2
30	0.7238	4
a	0.7508	4
b	-0.0$_3$89	4
Ref. Index n_D 20°C	1.4087	2
25	1.4061	2
30	1.4033	4
"C"	0.7427	4
MR (Obs.)	32.42	2
MR (Calc.)	32.524	5
(nD-d/2)	1.0423	2
Dielectric	1.98	5
A 14 to 142 °C	6.68593	5
B	1216.6	5
C	220.	5
A* 14 to 121 °C	1.05646	5
B*	1132.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 142 to t_c °C	7.10459	5
Bc	1538.4	5
Cc	265.0	5
Cryos. A°		
consts. B°		
t_e °C	110.76	5

Property	Value	Ref.
dt/dP °C/mm 25°C	0.4081	5
BP	0.0450	2
t_e	0.03836	5
30 mm	0.6491	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.69	5
30 mm	87.26	5
BP	75.40	5
t_e	73.85	5
t_e (d, e)	73.88	5
ΔHv/T_e	18.50	5
d 14 to 111 °C	89.13	5
e	0.1377	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	280.	5
P_c mm	19163.	5
PV/RT 25°C	0.9996	5
30 mm	1.0000	5
BP	0.9622	5
t_e	0.9529	5
t_c		
ΔHc kcal/m	1029.77	2
ΔHf	24.62	2
ΔFf	54.18	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.37716	2
400	0.46597	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to 600 °K	0.0526	4
n	0.0012	4
o	-0.0$_6$48	4
m' 700 to 1000 °K	0.1346	4
n'	0.0010	4
o'	-0.0$_6$34	4
Surface tension dynes/cm. 20°C γ	22.34	5
30	21.25	5
40	20.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	285.4	5
Exp. L. l. %/wt. u.		
Dispersion	113.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1-Octyne	STRUCTURAL FORMULA
		$C_6H_{13}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192

Property	Value	Ref.
F.P. °C	-79.3	2
F.P. 100%		
B.P. °C 760 mm	126.2	2
100	66.39	5
30	39.86	5
10	19.68	5
1	-13.73	5
Pressure mm 25°C	13.60	5
t_e	1077.7	5
Density g/ml 20°C	0.7461	2
d^t_4 25	0.7419	2
30	0.7377	4
a	0.7629	4
b	0.000836	4
Ref. Index n_D 20°C	1.4159	2
25	1.4134	2
30	1.4109	4
"C"	0.7146	5
MR (Obs.)	37.05	2
MR (Calc.)	37.142	5
(nD-d/2)	1.0428	2
Dielectric		
A (25 to 170 °C)	7.02447	4
B	1413.8	4
C	215.0	5
A* (33 to 160 °C)	1.44610	5
B*	1329.7	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	139.16	5

Property	Value	Ref.
dt/dP °C/mm 25°C	1.3009	5
BP	0.0471	2
t_e	0.0358	5
30 mm	0.6651	5
ΔHm cal/g		
ΔHv cal/g 25°C	90.74	5
30 mm	88.54	5
BP	75.99	5
t_e	74.18	5
t_e (d, e)	74.11	5
ΔHv/T_e	19.82	5
d (25 to 150 °C)	94.33	5
e	0.1453	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 25°C	1.0016	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9394	5
t_c		
ΔHc kcal/m	1176.70	2
ΔHf	19.70	2
ΔFf	56.19	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.3790	2
400	0.4696	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	0.0487	4
n	0.0012	4
o	-0.0_648	4
m' (700 to 1000 °K)	0.1326	4
n'	0.0010	4
o'	-0.0_634	4
Surface tension dynes/cm. γ 20°C	23.27	5
30	22.23	5
40	21.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	324.4	5
Exp. L.1.%/wt. u.		
Dispersion	111.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

No. 11

NAME	1-Nonyne		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{16}	Molecular Weight 124.218
			$C_7H_{15}C\equiv CH$

		Ref.
F.P. °C		
F.P. 100%	-50.	2
B.P. °C 760 mm	150.8	2
100	84.23	5
30	55.19	5
10	33.28	5
1	2.64	5
Pressure mm 25°C	6.26	5
t_e	1148.0	5
Density g/ml 20°C	0.7568	2
d^t_4 25	0.7527	2
30	0.7486	4
a	0.7732	5
b	-0.0_382	5
Ref. Index n_D 20°C	1.4217	2
25	1.4193	2
30	1.4169	4
"C"		
MR (Obs.)	41.64	2
MR (Calc.)	41.760	5
(nD-d/2)	1.0430	2
Dielectric		
A 50 to 223 °C	6.77410	5
B	1404.7	5
C	210.	5
A* 51 to 180 °C	1.22540	5
B*	1316.75	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	168.2	5

		Ref.
dt/dP °C/mm 25°C	2.727	5
BP	0.0530	5
t_e	0.0385	5
30 mm	0.7247	5
ΔHm cal/g		
ΔHv cal/g 25°C	83.15	5
30 mm	79.30	5
BP	67.35	5
t_e	65.28	5
t_e (d, e)	64.52	5
ΔHv/T_e	18.40	5
d 50 to 160 °C	86.20	5
e	0.1250	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	334.	5
P_c mm	14300.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9346	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38046	2
400	0.47248	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0459	4
n	0.0013	4
o	-0.0_649	4
m' 700 to 1000 °K	0.1312	4
n'	0.0010	4
o'	-0.0_635	4
Surface tension dynes/cm. γ 20°C	24.02	5
30	23.00	5
40	22.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	363.4	5
Exp. L. l. %/wt. u.		
Dispersion	110.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	1-Decyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{10}H_{18}$ / Molecular Weight 138.244	$C_8H_{17}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-44.	2
F.P. 100%		
B.P. °C 760 mm	174.	2
100	108.48	5
30	79.28	5
10	57.00	5
1	20.00	5
Pressure mm 25°C	1.42	5
t_e	1198.8	5
Density g/ml 20°C	0.7655	2
d_4^t 25	0.7616	2
30	0.7577	4
a	0.7811	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4265	2
25	1.4242	2
30	1.4219	4
"C"	0.7402	4
MR (Obs.)	46.30	2
MR (Calc.)	46.378	5
(nD-d/2)	1.0437	2
Dielectric		
A (78 to 246 °C)	7.10870	5
B	160[illegible].6	5
C	206.0	5
A* (78 to 204 °C)	1.60046	5
B*	1519.05	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (t_c) to °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	192.7	5

Property	Value	Ref.
dt/dP °C/mm 25°C	10.1246	5
BP	0.0514	5
t_e	0.0358	5
30 mm	0.7333	5
ΔHm cal/g		
ΔHv cal/g 25°C	88.69	5
30 mm	81.14	5
BP	68.78	5
t_e	66.49	5
t_e (d,e)	66.38	5
$\Delta Hv/T_e$	19.63	5
d (78 to 194 °C)	91.48	5
e	0.1304	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	354.	5
P_c mm	17454.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9250	5
t_c		
ΔHc kcal/m	1470.54	2
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38157	2
400	0.47481	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	0.0424	4
n	0.0013	4
o	-0.0_649	4
m' (700 to 1000 °K)	0.1345	4
n'	0.0010	4
o'	-0.0_635	4
Surface tension dynes/cm. γ 20°C	24.65	5
30	23.66	5
40	22.70	4
Parachor [P] 20°C		
30		
40		
Sugd.	402.4	5
Exp. L.1.%/wt. u.		
Dispersion	108.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.83\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	1-Undecyne		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{20}$	Molecular Weight 157.270
			$C_9H_{19}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-25.	2
F.P. 100%		
B.P. °C 760 mm	195.	2
100	126.84	4
30	96.43	4
10	73.20	5
1	34.61	5
0.1	5.51	5
Press. mm t_e	1248.	5
Density g/ml 20°C	0.7728	2
d^t_4 25	0.7690	2
30	0.7652	4
a	0.7880	4
b	$-0.0_{3}76$	4
Ref. Index n_D 20°C	1.4306	2
25	1.4284	2
30	1.4262	4
"C"	0.7398	4
MR (Obs.)	50.97	2
MR (Calc.)	50.996	5
(nD-d/2)	1.0442	2
Dielectric	2.05	5
A 80 to 267 °C	7.13064	4
B	1687.2	4
C	202.	5
A* 80 to 267°C	1.67084	5
B*	1599.5	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 267 to t_c °C	8.22204	5
Bc	2858.81	5
Cc	342.89	5
Cryos. consts. A°		
B°		
t_e °C	216.2	5

$T_R = 0.84\ T_c$

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	110.84	5
BP	0.0534	5
t_e	0.0361	5
30 mm	0.7642	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	88.55	5
30 mm	75.22	5
BP	63.31	5
t_e	60.92	5
t_e (d, e)	60.74	5
$\Delta Hv/T_e$	19.57	5
d 97 to 217 °C	86.88	5
e	0.1209	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	373.	5
P_c mm	16891.	5
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9339	5
t_e	0.9169	5
t_c		
ΔHc kcal/m	1617.48	2
ΔHf	4.92	2
ΔFf	62.21	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38248	2
400	0.47665	2
c_v vap.		

Property	Value	Ref.
f to °K		
g		
h		
f' to °K		
g'		
h'		
m 300 to 600 °K	0.0405	4
n	0.0013	4
o	$-0.0_{6}49$	4
m' 700 to 1000 °K	0.1329	4
n'	0.0010	4
o'	$-0.0_{6}35$	4
Surface tension dynes/cm. γ 20°C	22.13	5
30	21.27	5
40	20.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	441.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	107.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 14

NAME	1-Dodecyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{12}H_{22}$ / Molecular Weight 166.296	$C_{10}H_{21}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-19.	2
F.P. 100%		
B.P. °C 760 mm	215.	2
100	144.63	4
30	113.15	4
10	89.09	5
1	49.05	5
0.1	18.8	5
Press. mm t_e	1313.0	5
Density g/ml 20°C	0.7788	2
d^t_4 25	0.7751	2
30	0.7714	4
a	0.7936	4
b	-0.0₃74	4
Ref. Index n_D 20°C	1.4340	2
25	1.4318	2
30	1.4296	4
"C"	0.7396	4
MR (Obs.)	55.61	2
MR (Calc.)	55.614	5
(nD-d/2)	1.0446	2
Dielectric	2.06	5
A 113 to 288 °C	7.16929	4
B	1771.1	4
C	198.	5
A* 100 to 288 °C	1.70703	5
B*	1677.4	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac 288 to t_c °C	8.42471	5
Bc	3185.77	5
Cc	362.54	5
Cryos. consts. A°		
B°		
t_e °C	239.2	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	115.26	5
BP	0.0550	5
t_e	0.0357	5
30 mm	0.7913	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	81.75	5
30 mm	75.06	5
BP	63.49	5
t_e	60.89	5
t_e (d, e)	60.74	5
ΔHv/T_e	19.76	5
d 100 to 250 °C	87.91	5
e	0.1136	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C	391.	5
P_c mm	15719.	5
PV/RT 0.1 mm	0.9251	5
30 mm	1.0000	5
BP	0.9391	5
t_e	0.9211	5
t_c		
ΔHc kcal/m	1764.40	2
ΔHf	-0.01	2
ΔFf	64.22	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38329	2
400	0.47818	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m 300 to 600 °K	0.0391	4
n	0.0013	4
o	-0.0₆50	4
m' 700 to 1000 °K	0.1278	4
n'	0.0011	4
o'	-0.0₆36	4
Surface tension dynes/cm. γ 20°C	25.62	5
30	24.66	5
40	23.73	5
Parachor [P] 20°C		
30		
40		
Sugd.	480.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	107.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.84\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 15

NAME	1-Tridecyne	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{13}H_{24}$ Molecular Weight 180.322	$C_{11}H_{23}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	-5.	2
F.P. 100%		
B.P. °C 760 mm	234.	2
100	160.72	4
30	127.97	4
10	102.95	5
1	61.31	5
0.1	29.89	5
Press. mm t_e	1350.7	5
Density g/ml 20°C	0.7842	2
d_4^t 25	0.7806	2
30	0.7770	4
a	0.7986	4
b	-0.0_372	4
Ref. Index n_D 20°C	1.4371	2
25	1.4349	2
30	1.4327	4
"C"	0.7394	4
MR (Obs.)	60.25	2
MR (Calc.)	60.232	5
(nD-d/2)	1.0449	2
Dielectric	2.06	5
A 120 to	7.15674	4
B 308 °C	1834.4	4
C	195.	5
A* 120 to	1.73019	5
B* 270 °C	1742.5	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 308 to	8.66116	5
Bc t_c °C	3575.90	5
Cc	387.79	5
Cryos. A°		
consts. B°		
t_e °C	260.6	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	119.74	5
BP	0.0573	5
t_e	0.0364	5
30 mm	0.8232	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	84.53	5
30 mm	71.78	5
BP	60.04	5
t_e	57.33	5
t_e (d, e)	57.10	5
$\Delta Hv/T_e$	21.5	5
d 120 to	85.87	5
e 260 °C	0.1104	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	408.	5
P_c mm	14663.	5
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9299	5
t_e	0.9095	5
t_c		
ΔHc kcal/m	1911.32	2
ΔHf	-4.93	2
ΔFf	66.23	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38392	2
400	0.47948	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0376	4
n 600 °K	0.0013	4
o	-0.0_650	4
m' 700 to	0.1306	4
n' 1000 °K	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. 20°C	26.03	5
γ 30	25.09	5
40	24.17	5
Parachor [P] 20°C		
30		
40		
Sugd.	519.4	5
Exp. L. l. %/wt.		
u.		
Dispersion	106.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	1-Tetradecyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{14}H_{26}$; Molecular Weight 194.348	$C_{12}H_{25}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	0.	2
F.P. 100%		
B.P. °C 760 mm	252.	2
100	177.42	4
30	143.95	4
10	118.31	5
1	75.54	5
0.1	43.16	5
Press. mm t_e	1401.3	5
Density g/ml 20°C	0.7888	2
d^t_4 25	0.7852	2
30	0.7816	4
a	0.8032	4
b	-0.0372	4
Ref. Index n_D 20°C	1.4396	2
25	1.4375	2
30	1.4354	4
"C"	0.7391	4
MR (Obs.)	64.89	2
MR (Calc.)	64.850	5
(nD-d/2)	1.0452	2
Dielectric	2.07	5
A 145 to	7.23227	4
B 326 °C	1927.7	4
C	191.	5
A* 145 to	1.82367	5
B* 291 °C	1833.2	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 326 to	8.88957	5
Bc t_c °C	3977.36	5
Cc	413.26	5
Cryos. consts. A°		
B°		
t_e °C	280.8	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	123.53	5
BP	0.0582	5
t_e	0.0358	5
30 mm	0.8425	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	82.84	5
30 mm	70.33	5
BP	58.89	5
t_e	56.05	5
t_e (d, e)	55.83	5
ΔHv/T_e	19.66	5
d 145 to	85.52	5
e 281 °C	0.1059	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C	422.	5
P_c mm	13515.	5
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9306	5
t_e	0.9092	5
t_c		
ΔHc kcal/m	2058.24	2
ΔHf	-9.86	2
ΔFf	68.24	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38452	2
400	0.48058	2
c_v vap.		

Property	Value	Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0368	4
n 600 °K	0.0013	4
o	-0.0$_6$50	4
m' 700 to	0.1296	4
n' 1000 °K	0.0011	4
o'	-0.0$_6$36	4
Surface tension dynes/cm. γ 20°C	26.38	5
30	25.43	5
40	24.51	5
Parachor [P] 20°C		
30		
40		
Sugd.	558.4	5
Exp. L.I.%/wt. u.		
Dispersion	105.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.86\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 17

NAME	1-Pentadecyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{15}H_{28}$ / Molecular Weight 208.374	$C_{13}H_{27}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	10.	2
F.P. 100%		
B.P. °C 760 mm	268.	2
100	190.84	4
30	156.26	4
10	129.79	5
1	85.69	5
0.1	52.33	5
Press. mm t_e	1427.3	5
Density g/ml 20°C	0.7928	2
d_4^t 25	0.7893	2
30	0.7858	4
a	0.8068	4
b	-0.0370	4
Ref. Index n_D 20°C	1.4419	2
25	1.4398	2
30	1.4377	4
"C"	0.7390	4
MR (Obs.)	69.53	2
MR (Calc.)	69.468	5
(nD-d/2)	1.0455	2
Dielectric	2.08	5
A 140 to 349°C	7.20553	4
B	1972.07	4
C	188.	5
A* 150 to 310°C	1.83303	5
B*	1881.34	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	298.8	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	127.20	5
BP	0.0603	5
t_e	0.0366	5
30 mm	0.8700	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm	79.33	5
30 mm	67.33	5
BP	55.69	5
t_e	52.77	5
t_e (d, e)	52.48	5
$\Delta Hv/T_e$	19.22	5
d 150 to 305 °C	83.61	5
e	0.1042	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9208	5
t_e	0.8969	5
t_c		
ΔHc kcal/m	2205.17	2
ΔHf	-14.78	2
ΔFf	70.25	2
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38498	2
400	0.48154	2
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0357	4
n	0.0013	4
o	-0.0_650	4
m' 700 to 1000 °K	0.1294	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	26.69	5
30	25.76	5
40	24.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	597.4	5
Exp. L.1.%/wt. u.		
Dispersion	105.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	1-Hexadecyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{16}H_{30}$ / Molecular Weight 222.400	$C_{14}H_{29}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	15.	2
F.P. 100%		
B.P. °C 760 mm	284.	2
100	208.55	4
30	174.24	4
10	147.8	5
1	103.3	5
0.1	69.2	5
Press. mm t_e	1465.5	5
Density g/ml 20°C	0.7965	2
d_4^t 25	0.7930	2
30	0.7895	4
a	0.8105	4
b	-0.0$_3$70	4
Ref. Index n_D 20°C	1.4440	2
25	1.4419	2
30	1.4398	4
"C"	0.7388	4
MR (Obs.)	74.17	2
MR (Calc.)	74.086	5
(nD-d/2)	1.0457	2
Dielectric	2.08	5
A (172 to 367 °C)	7.47511	4
B	2154.7	4
C	185.	5
A* (172 to 327 °C)	2.12483	5
B*	2064.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac Bc Cc t_c °C		
Cryos. consts. A° B°		
t_e °C	316.2	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	130.28	5
BP	0.0583	5
t_e	0.0344	5
30 mm	0.8670	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	68.73	5
BP	57.04	5
t_e	53.99	5
t_e (d, e)	53.7	5
ΔHv/T_e	21.7	5
d (172 to 317 °C)	87.30	5
e	0.1066	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9197	5
t_e	0.8955	5
t_c		
ΔHc kcal/m	2352.09	2
ΔHf	-19.71	2
ΔFf	72.26	2
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38539	2
400	0.48237	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	0.0349	4
n	0.0013	4
o	-0.0$_6$50	4
m' (700 to 1000 °K)	0.1290	4
n'	0.0011	4
o'	-0.0$_6$36	4
Surface tension dynes/cm. γ 20°C	26.99	5
30	26.05	5
40	25.14	5
Parachor [P] 20°C		
30		
40		
Sugd.	636.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	104.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	1-Heptadecyne			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{32}$	Molecular Weight 236.426	$C_{15}H_{31}C{\equiv}CH$

		Ref.
F.P. °C	22.	2
F.P. 100%		
B.P. °C		
760 mm	299.	2
100	221.80	4
30	186.68	4
10	159.6	5
1	114.0	5
0.1	79.1	5
Press. mm t_e	1502.1	5
Density g/ml 20°C	0.7996≠	2
d_4^t 25	0.7961	2
30	0.7926	4
a	0.8136	4
b	-0.0370	4
Ref. Index n_D 20°C	1.4457≠	2
25	1.4437	2
30	1.4417	4
"C"	0.7386	4
MR (Obs.)	78.802≠	2
MR (Calc.)	78.704	5
(nD-d/2)	1.0459≠	2
Dielectric	2.09	5
A 184 to	7.48829	4
B 384 °C	2216.2	4
C	182.	5
A* 184 to	2.21619	5
B* 344 °C	2125.3	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	333.7	5

		Ref.
dt/dP °C/mm		
0.1 mm	133.58	5
BP	0.0597	5
t_e	0.0345	5
30 mm	0.8879	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm		
30 mm	66.70	5
BP	55.18	5
t_e	52.06	5
t_e (d,e)	51.5	5
$\Delta Hv/T_e$	21.5	5
d 184 to	85.85	5
e 334 °C	0.1026	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9176	5
t_e	0.8921	5
t_c		
ΔHc kcal/m	2499.01	2
ΔHf	-24.64	2
ΔFf	74.27	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38579	2
400	0.48311	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	0.0342	4
n 600 °K	0.0013	4
o	-0.0_650	4
m' 700 to	0.1278	4
n' 1000 °K	0.0011	4
o'	-0.0_637	4
Surface tension dynes/cm. 20°C γ	27.22	5
30	26.28	5
40	25.37	5
Parachor [P] 20°C		
30		
40		
Sugd.	675.4	5
Exp. L.1.%/wt. u.		
Dispersion	104.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 20

NAME	1-Octadecyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{18}H_{34}$ / Molecular Weight 250.452	$C_{16}H_{33}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	27.	2
F.P. 100%		
B.P. °C 760 mm	313.	2
100	234.16	4
30	198.25	4
10	170.5	5
1	123.8	5
0.1	88.1	5
Press. mm t_e	1540.6	5
Density g/ml 20°C d^t_4	0.8025≠	2
25	0.7990≠	2
30	0.7955≠	4
a	0.8165	4
b	-0.0370	4
Ref. Index n_D 20°C	1.4474≠	2
25	1.4453≠	2
30	1.4432≠	4
"C"	0.7386	4
MR (Obs.)	83.451≠	2
MR (Calc.)	83.322	5
(nD-d/2)	1.0461≠	2
Dielectric	2.09	5
A (196 to 400 °C)	7.50787	4
B	2281.1	4
C	180.	5
A* (196 to 360 °C)	2.19183	5
B*	2187.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac (t_c °C)		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	348.0	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	136.86	5
BP	0.0609	5
t_e	0.0345	5
30 mm	0.9080	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	64.71	5
BP	53.55	5
t_e	50.39	5
t_e (d, e)	50.2	5
$\Delta Hv/T_e$	21.4	5
d (196 to 350 °C)	83.98	5
e	0.0972	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9178	5
t_e	0.8914	5
t_c		
ΔHc kcal/m	2645.94	2
ΔHf	-29.56	2
ΔFf	76.28	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38610	2
400	0.48377	2
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m (300 to 600 °K)	0.0334	4
n	0.0013	4
o	-0.0_650	4
m' (700 to 1000 °K)	0.1301	4
n'	0.0011	4
o'	-0.0_636	4
Surface tension dynes/cm. γ 20°C	27.46	5
30	26.51	5
40	25.59	5
Parachor [P] 20°C		
30		
40		
Sugd.	714.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	104.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 21

NAME	1-Nonadecyne		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{36}$	Molecular Weight 264.478
			$C_{17}H_{35}C{\equiv}CH$

		Ref.
F.P. °C	33.	2
F.P. 100%		
B.P. °C 760 mm	327.	2
100	246.54	4
30	209.87	4
10	181.6	4
1	133.9	5
0.1	97.4	5
Press. mm t_e	1580.0	5
Density g/ml 20°C	0.8050≠	2
d_4^t 25	0.8016≠	2
30	0.7982≠	4
a	0.8186	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4488≠	2
25	1.4467≠	2
30	1.4446≠	4
"C"	0.7384	4
MR (Obs.)	88.088≠	2
MR (Calc.)	87.940	5
(nD-d/2)	1.0463≠	2
Dielectric	2.10	
A 208 to 416 °C	7.51711	4
B	2336.7	4
C	177.	5
A* 208 to 376 °C	2.21395	5
B*	2241.3	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	365.2	5

		Ref.
dt/dP °C/mm 0.1 mm	139.89	5
BP	0.0621	5
t_e	0.0344	5
30 mm	0.9272	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	63.00	5
BP	52.12	5
t_e	48.92	5
t_e (d, e)	48.68	5
ΔHv/T_e	21.2	5
d 208 to 366 °C	82.47	5
e	0.0928	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9184	5
t_e	0.8912	5
t_c		
ΔHc kcal/m	2792.86	2
ΔHf	-34.49	2
ΔFf	78.29	2
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38642	2
400	0.48435	2
c_v vap.		

			Ref.
f	to °K		
g			
h			
f'	to °K		
g'			
h'			
m	300 to 600 °K	0.0329	4
n		0.0013	4
o		-0.0_650	4
m'	700 to 1000 °K	0.1267	4
n'		0.0011	4
o'		-0.0_637	4
Surface tension dynes/cm. γ	20°C	27.65	5
	30	26.73	5
	40	25.83	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	753.4	5
Exp. L.1.%/wt. u.			
Dispersion		103.≠	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 22

NAME	1-Eicosyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{38}$	Molecular Weight 278.504	$C_{18}H_{37}C{\equiv}CH$

		Ref.
F.P. °C	36.	2
F.P. 100%		
B.P. °C 760 mm	340.	2
100	258.03	4
30	220.67	4
10	191.8	5
1	143.2	5
0.1	106.0	5
Press. mm t_e	1601.5	5
Density g/ml 20°C	0.8073≠	2
d^t_4 25	0.8039≠	2
30	0.8005≠	4
a	0.8209	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4501≠	2
25	1.4481≠	2
30	1.4461≠	4
"C"	0.7383	4
MR (Obs.)	92.728≠	2
MR (Calc.)	92.558	5
(nD-d/2)	1.0465≠	2
Dielectric	2.10	5
A 219 to 431 °C	7.52336	4
B	2386.3	4
C	174.	5
A* 219 to 391 °C	2.24673	5
B*	2294.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	379.8	5

		Ref.
dt/dP °C/mm 0.1 mm	142.65	5
BP	0.0633	5
t_e	0.0347	5
30 mm	0.9540	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	60.40	5
BP	50.36	5
t_e	47.09	5
t_e (d, e)	46.82	5
ΔHv/T_e	21.4	5
d 219 to 381 °C	81.68	5
e	0.0921	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.9122	5
t_e	0.8833	5
t_c		
ΔHc kcal/m	2939.78	2
ΔHf	-39.41	2
ΔFf	81.00	2
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v) (A^v)		
c_p liq. °K		
c_p vap. 300°K	0.38677	2
400	0.48488	2
c_v vap.		

		Ref.
f g h to °K		
f' g' h' to °K		
m 300 to 600 °K	0.0323	4
n	0.0013	4
o	$-0.0_{6}50$	4
m' 700 to 1000 °K	0.1264	4
n'	0.0011	4
o'	$-0.0_{6}37$	4
Surface tension dynes/cm. γ 20°C	27.84	5
30	26.91	5
40	26.01	5
Parachor [P] 20°C		
30		
40		
Sugd.	792.4	5
Exp. L.I. %/wt. u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II; Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 23

NAME	1-Heneicosyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{21}H_{40}$ / Molecular Weight 292.530	$C_{19}H_{39}C\equiv CH$

Property	Value	Ref.
F.P. °C	41.	2
F.P. 100%		
B.P. °C 760 mm	352.	2
100	268.63	4
30	230.60	4
10	201.2	5
1	151.7	5
0.1	113.8	5
Press. mm t_e	1594.2	5
Density g/ml 20°C	0.8094≠	2
d^t_4 25	0.8060≠	2
30	0.8026≠	4
a	0.8230	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4513≠	2
25	1.4493≠	2
30	1.4473≠	4
"C"	0.7383	4
MR (Obs.)	97.33 ≠	2
MR (Calc.)	97.176	5
(nD-d/2)	1.0466≠	2
Dielectric	2.11	5
A (229 to 444 °C)	7.53602	4
B	2439.3	4
C	172.	5
A* (229 to 404 °C)	2.30870	5
B*	2360.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	393.3	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	145.39	5
BP	0.0643	5
t_e	0.0354	5
30 mm	0.9700	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	58.90	5
BP	48.06	5
t_e	44.72	5
t_e (d, e)	44.32	5
ΔHv/T_e	20.9	5
d (229 to 394 °C)	81.85	5
e	0.0960	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8948	5
t_e	0.8628	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.00	5
30	27.07	5
40	26.17	5
Parachor [P] 20°C		
30		
40		
Sugd.	831.4	5
Exp. L. l. %/wt. u.		
Dispersion	103.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 24

NAME	1-Docosyne	STRUCTURAL FORMULA
		$C_{20}H_{41}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula $C_{22}H_{42}$	Molecular Weight 306.556

		Ref.
F.P. °C	45.	2
F.P. 100%		
B.P. °C 760 mm	363.	2
100	278.35	4
30	239.72	4
10	209.9	5
1	159.5	5
0.1	121.0	5
Press. mm t_e	1621.8	5
Density g/ml 20°C	0.8114≠	2
d^t_4 25	0.8080≠	2
30	0.8046≠	4
a	0.8250	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4524≠	2
25	1.4504≠	2
30	1.4484≠	4
"C"	0.7381	4
MR (Obs.)	101.97 ≠	2
MR (Calc.)	101.794	5
(nD-d/2)	1.0468≠	2
Dielectric	2.11	5
A (238 to 457 °C)	7.54576	4
B	2486.4	4
C	170.	5
A* (238 to 417 °C)	2.33263	5
B*	2406.6	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. consts. A°		
B°		
t_e °C	405.7	5

		Ref.
dt/dP °C/mm 0.1 mm	147.86	5
BP	0.0653	5
t_e	0.0354	5
30 mm	0.9774	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	58.13	5
BP	46.74	5
t_e	43.38	5
t_e (d, e)	43.0	5
ΔHv/T_e	20.9	5
d (238 to 407 °C)	80.28	5
e	0.0924	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8943	5
t_e	0.8615	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.17	5
30	27.24	5
40	26.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	870.4	5
Exp. L.l.%/wt.		
u.		
Dispersion	103. ≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	1-Tricosyne	STRUCTURAL FORMULA
		$C_{21}H_{43}C\equiv CH$

Mole % Pur.	Ref.	Molecular Formula $C_{23}H_{44}$	Molecular Weight 320.582

Property	Value	Ref.
F.P. °C	49.	2
F.P. 100%		
B.P. °C 760 mm	374.	2
100	288.06	4
30	248.83	4
10	218.5	5
1	167.3	5
0.1	128.1	5
Press. mm t_e	1648.9	5
Density g/ml 20°C	0.8131≠	2
d_4^t 25	0.8100≠	2
30	0.8069≠	4
a	0.8255	4
b	-0.0362	4
Ref. Index n_D 20°C	1.4534≠	2
25	1.4514≠	2
30	1.4494≠	4
"C"	0.7381	4
MR (Obs.)	106.62 ≠	2
MR (Calc.)	106.412	5
(nD-d/2)	1.0469≠	2
Dielectric	2.11	5
A 248 to 469 °C	7.55521	4
B	2533.5	4
C		
A* 248 to 429 °C	2.35591	5
B*	2453.2	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	418.1	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	150.33	5
BP	0.0663	5
t_e	0.0355	5
30 mm	0.9928	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	56.68	5
BP	45.54	5
t_e	42.18	5
t_e (d, e)	41.82	5
$\Delta Hv/T_e$	20.9	5
d 248 to 419 °C	78.84	5
e	0.0890	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8936	5
t_e	0.8600	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.30	5
30	27.45	5
40	26.62	5
Parachor [P] 20°C		
30		
40		
Sugd.	909.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	102. ≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 26

NAME	1-Tetracosyne	STRUCTURAL FORMULA
		$C_{22}H_{45}C \equiv CH$

Mole % Pur.	Ref.	Molecular Formula $C_{24}H_{46}$	Molecular Weight 334.608

Property	Value	Ref.
F.P. °C	52.	2
F.P. 100%		
B.P. °C 760 mm	385.	2
100	297.78	4
30	257.94	4
10	227.1	5
1	175.2	5
0.1	135.3	5
Press. mm t_e	1677.	5
Density g/ml 20°C	0.8148≠	2
d_4^t 25	0.8114≠	2
30	0.8080≠	4
a	0.8284	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4544≠	2
25	1.4523≠	2
30	1.4502≠	4
"C"	0.7381	4
MR (Obs.)	111.26 ≠	2
MR (Calc.)	111.030	5
(nD-d/2)	1.0470≠	2
Dielectric	2.11	5
A 257 to 482 °C	7.56438	4
B	2580.7	4
C	166.	5
A* 257 to 442 °C	2.37736	5
B*	2499.5	5
K		
c		
t_k to °C		
t_x		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac to t_c °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	430.4	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	152.80	5
BP	0.0672	5
t_e	0.0355	5
30 mm	1.0082	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	55.36	5
BP	44.42	5
t_e	41.01	5
t_e (d, e)	40.66	5
$\Delta Hv/T_e$	20.8	5
d 257 to 432 °C	77.56	5
e	0.0861	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8933	5
t_e	0.8589	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.45	5
30	27.51	5
40	26.59	5
Parachor [P] 20°C		
30		
40		
Sugd.	948.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	102. ≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 27

NAME	1-Pentacosyne	STRUCTURAL FORMULA
		$C_{23}H_{47}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula $C_{25}H_{48}$	Molecular Weight 348.634

Property	Value	Ref.
F.P. °C	55.	2
F.P. 100%		
B.P. °C 760 mm	395.	2
100	306.62	4
30	266.24	4
10	235.0	5
1	182.3	5
0.1	141.9	5
Press. mm t_e	1701.6	5
Density g/ml 20°C	0.8163≠	2
d_4^t 25	0.8129≠	2
30	0.8095≠	4
a	0.8299	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4552≠	2
25	1.4532≠	2
30	1.4512≠	4
"C"	0.7380	4
MR (Obs.)	115.89 ≠	2
MR (Calc.)	115.648	5
(nD-d/2)	1.0471≠	2
Dielectric	2.12	5
A 265 to 493 °C	7.57091	4
B	2621.8	4
C	164.	5
A* 265 to 453 °C	2.39684	5
B*	2540.2	5
K		
c		
t_k to t_x °C		
A' B' to °C C'		
A'* B'* to °C		
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	441.7	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	155.00	5
BP	0.0681	5
t_e	0.0355	5
30 mm	1.0221	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	54.06	5
BP	43.32	5
t_e	39.89	5
t_e (d, e)	39.56	5
$\Delta Hv/T_e$	20.8	5
d 265 to 443 °C	76.26	5
e	0.0834	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8927	5
t_e	0.8575	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.57	5
30	27.63	5
40	26.71	5
Parachor [P] 20°C		
30		
40		
Sugd.	987.4	5
Exp. L. l. %/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	1-Hexacosyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$C_{24}H_{49}C{\equiv}CH$
Molecular Formula	$C_{26}H_{50}$	
Molecular Weight	362.660	

Property	Value	Ref.
F.P. °C	57.	2
F.P. 100%		
B.P. °C 760 mm	405.	2
100	315.45	4
30	274.53	4
10	242.9	5
1	189.4	5
0.1	148.5	5
Press. mm t_e	1727.	5
Density g/ml 20°C	0.8177≠	2
d^t_4 25	0.8143≠	2
30	0.8109≠	4
a	0.8313	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4560≠	2
25	1.4540≠	2
30	1.4520≠	4
"C"	0.7379	4
MR (Obs.)	120.53≠	2
MR (Calc.)	120.266	5
(nD-d/2)	1.0472≠	2
Dielectric	2.12	5
A 274 to 504°C	7.57727	4
B	2662.9	4
C	162.	5
A* 274 to 464°C	2.41490	5
B*	2580.6	5
K, c, t_k, t_x to °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac, Bc, Cc t_c to °C		
Cryos. consts. A°, B°		
t_e °C	452.9	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	157.19	5
BP	0.0690	5
t_e	0.0356	5
30 mm	1.0359	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	52.86	5
BP	42.32	5
t_e	38.87	5
t_e (d, e)	38.55	5
ΔHv/T_e	20.8	5
d 274 to 454 °C	75.04	5
e	0.0808	5
d', e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8924	5
t_e	0.8565	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.68	5
30	27.74	5
40	26.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	1026.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 29

NAME	1-Heptacosyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{27}H_{52}$
Molecular Weight 376.686		$C_{25}H_{51}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	60.	2
F.P. 100%		
B.P. °C 760 mm	415.	2
100	324.29	4
30	282.82	4
10	250.7	5
1	196.6	5
0.1	155.0	5
Press. mm t_e	1751.8	5
Density g/ml 20°C	0.8190≠	2
d_4^t 25	0.8156≠	2
30	0.8122≠	4
a	0.8326	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4568≠	2
25	1.4548≠	2
30	1.4528≠	4
"C"	0.7380	4
MR (Obs.)	125.17 ≠	2
MR (Calc.)	124.884	5
(nD-d/2)	1.0473≠	2
Dielectric	2.12	5
A 282 to 515°C	7.58347	4
B	2704.0	4
C	160.	5
A* 282 to 475°C	2.43266	5
B*	2621.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	464.2	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	159.39	5
BP	0.0699	5
t_e	0.0356	5
30 mm	1.0498	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	51.75	5
BP	41.38	5
t_e	37.91	5
t_e (d, e)	37.64	5
$\Delta Hv/T_e$	20.6	5
d 282 to 465 °C	73.94	5
e	0.0784	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8919	5
t_e	0.8553	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.79	5
30	27.85	5
40	26.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	1065.4	5
Exp. L.1.%/wt. u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 30

NAME	1-Octacosyne	STRUCTURAL FORMULA
		$C_{26}H_{53}C{\equiv}CH$
Mole % Pur.	Ref.	Molecular Formula $C_{28}H_{54}$ / Molecular Weight 390.712

Property	Value	Ref.
F.P. °C	62.	2
F.P. 100%		
B.P. °C 760 mm	424.	2
100	332.25	4
30	290.3	4
10	257.8	5
1	203.0	5
0.1	161.0	5
Press. mm t_e	1773.5	5
Density g/ml 20°C	0.8202≠	2
d_4^t 25	0.8168≠	2
30	0.8134≠	4
a	0.8338	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4575≠	2
25	1.4555≠	2
30	1.4535≠	4
"C"	0.7380	4
MR (Obs.)	129.82 ≠	2
MR (Calc.)	129.502	5
(nD-d/2)	1.0474≠	2
Dielectric	2.12	5
A (290 to 526 °C)	7.58724	4
B	2739.1	4
C	158.	5
A* (290 to 486 °C)	2.44856	5
B*	2656.3	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	474.3	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	161.32	5
BP	0.0707	5
t_e	0.0356	5
30 mm	1.0621	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	50.65	5
BP	40.44	5
t_e	36.94	5
t_e (d, e)	36.64	5
$\Delta Hv/T_e$	20.7	5
d (290 to 476 °C)	72.82	5
e	0.0764	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8912	5
t_e	0.8539	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	28.89	5
30	27.94	5
40	27.02	5
Parachor [P] 20°C		
30		
40		
Sugd.	1104.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	1-Nonacosyne	STRUCTURAL FORMULA
		$C_{27}H_{55}CH{\equiv}CH$
Mole % Pur. / Ref.	Molecular Formula $C_{29}H_{56}$	Molecular Weight 404.738

Property	Value	Ref.
F.P. °C	65.	2
F.P. 100%		
B.P. °C 760 mm	432.	2
100	339.31	4
30	296.90	4
10	264.1	5
1	208.7	5
0.1	166.1	5
Press. mm t_e	1793.8	5
Density g/ml 20°C	0.8213≠	2
d_4^t 25	0.8180≠	2
30	0.8147≠	4
a	0.8345	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4581≠	2
25	1.4561≠	2
30	1.4541≠	4
"C"	0.7379	4
MR (Obs.)	134.45 ≠	2
MR (Calc.)	134.120	5
(nD-d/2)	1.0475≠	2
Dielectric	2.13	5
A 297 to 535°C	7.59699	4
B	2777.8	4
C	157.	5
A* 297 to 495°C	2.46916	5
B*	2694.2	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac to Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	483.3	

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	163.23	5
BP	0.0714	5
t_e	0.0357	5
30 mm	1.0737	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	49.51	5
BP	39.52	5
t_e	36.05	5
t_e (d,e)	35.78	5
ΔHv/T_e	20.5	5
d 297 to 485 °C	71.45	5
e	0.0739	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8531	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	28.98	5
30	28.06	5
40	27.16	5
Parachor [P] 20°C		
30		
40		
Sugd.	1143.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	102.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 32

NAME	1-Triacontyne	STRUCTURAL FORMULA
		$C_{28}H_{57}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula $C_{30}H_{58}$	Molecular Weight 418.764

Property	Value	Ref.
F.P. °C	67.	2
F.P. 100%		
B.P. °C 760 mm	441.	2
100	347.27	4
30	304.38	4
10	271.2	5
1	215.1	5
0.1	172.1	5
Press. mm t_e	1816.2	5
Density g/ml 20°C	0.8224≠	2
d^t_4 25	0.8190≠	2
30	0.8156≠	4
a	0.8360	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4587≠	2
25	1.4567≠	2
30	1.4547≠	4
"C"	0.7378	4
MR (Obs.)	139.08≠	2
MR (Calc.)	138.738	5
(nD-d/2)	1.0475≠	2
Dielectric	2.13	5
A (304 to 545 °C)	7.60053	4
B	2813.0	4
C	155.	5
A* (304 to 505 °C)	2.48323	5
B*	2729.0	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	493.4	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	165.2	5
BP	0.0722	5
t_e	0.0357	5
30 mm	1.086	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	48.55	5
BP	38.71	5
t_e	35.19	5
t_e (d, e)	34.99	5
$\Delta Hv/T_e$	20.6	5
d (304 to 495 °C)	70.49	5
e	0.0721	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8906	5
t_e	0.8521	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.07	5
30	28.12	5
40	27.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	1182.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 33

NAME	1-Hentriacontyne	STRUCTURAL FORMULA
		$C_{29}H_{59}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula $C_{31}H_{60}$	Molecular Weight 432.790

Property	Value	Ref.
F.P. °C	69.	2
F.P. 100%		
B.P. °C 760 mm	449.	2
100	354.32	4
30	310.98	4
10	277.4	5
1	220.7	5
0.1	177.2	5
Press. mm t_e	1836.8	5
Density g/ml 20°C	0.8234≠	2
d_4^t 25	0.8200≠	2
30	0.8166≠	4
a	0.8370	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4593≠	2
25	1.4573≠	2
30	1.4553≠	4
"C"	0.7378	4
MR (Obs.)	143.71≠	2
MR (Calc.)	143.356	5
(nD-d/2)	1.0476≠	2
Dielectric	2.13	5
A 311 to 554°C	7.60994	4
B	2851.7	4
C	154.	5
A* 311 to 514°C	2.50239	5
B*	2766.9	5
K		
c		
t_k t_x to °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	502.4	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	167.06	5
BP	0.0729	5
t_e	0.0357	5
30 mm	1.0976	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	47.55	5
BP	37.90	5
t_e	34.39	5
t_e (d, e)	34.20	5
ΔHv/T_e	20.6	5
d 311 to 504 °C	69.30	5
e	0.0699	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8905	5
t_e	0.8515	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. 20°C	29.16	5
γ 30	28.21	5
40	27.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	1221.4	5
Exp. L. l. %/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 34

NAME	1-Dotriacontyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{32}H_{62}$ / Molecular Weight 446.816	$C_{30}H_{61}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	71.	2
F.P. 100%		
B.P. °C 760 mm	457.	2
100	361.40	4
30	317.64	4
10	283.7	5
1	226.5	5
0.1	182.5	5
Press. mm t_e	1858.9	5
Density g/ml 20°C	0.8243≠	2
d^t_4 25	0.8210≠	2
30	0.8177≠	4
a	0.8375	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4598≠	2
25	1.4578≠	2
30	1.4558≠	4
"C"	0.7378	4
MR (Obs.)	148.37≠	2
MR (Calc.)	147.974	5
(nD-d/2)	1.0477≠	2
Dielectric	2.13	5
A 318 to 563 °C	7.61111	4
B	2880.8	4
C	152.	5
A* 318 to 523 °C	2.51198	5
B*	2794.9	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc t_c to °C		
Cryos. consts. A° B°		
t_e °C	511.4	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	168.72	5
BP	0.0736	5
t_e	0.0357	5
30 mm	1.1084	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	46.66	5
BP	37.18	5
t_e	33.67	5
t_e (d, e)	33.47	5
$\Delta Hv/T_e$	20.6	5
d 318 to 513 °C	68.25	5
e	0.0680	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8910	5
t_e	0.8515	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v) (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.23	5
30	28.31	5
40	27.40	5
Parachor [P] 20°C		
30		
40		
Sugd.	1260.4	5
Exp. L.1.%/wt. u. Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 35

NAME	1-Tritriacontyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{33}H_{64}$; Molecular Weight 460.842	$C_{31}H_{63}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	73.	2
F.P. 100%		
B.P. °C 760 mm	464.	2
100	367.58	4
30	323.42	4
10	289.2	5
1	231.4	5
0.1	187.1	5
Press. mm t_e	1873.0	5
Density g/ml 20°C	0.8252≠	2
d_4^t 25	0.8218≠	2
30	0.8184≠	4
a	0.8388	4
b	-0.0368	4
Ref. Index n_D 20°C	1.4603≠	2
25	1.4583≠	2
30	1.4563≠	4
"C"	0.7377	4
MR (Obs.)	153.01 ≠	2
MR (Calc.)	152.592	5
(nD-d/2)	1.0477≠	2
Dielectric	2.13	5
A (324 to 571 °C)	7.61812	4
B	2913.4	4
C	151.	5
A* (324 to 531 °C)	2.53156	5
B*	2828.3	5
K		
c		
t_k to t_x °C		
A' to B' °C C'		
A'* to B'* °C		
Ac Bc t_c °C Cc		
Cryos. consts. A° B°		
t_e °C	519.3	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	170.36	5
BP	0.0742	5
t_e	0.0358	5
30 mm	1.1184	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	45.71	5
BP	36.35	5
t_e	32.82	5
t_e (d, e)	32.66	5
ΔHv/T_e	20.5	5
d (324 to 521 °C)	67.25	5
e	0.0666	5
d' to e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8895	5
t_e	0.8494	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.31	5
30	28.35	5
40	27.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	1299.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 36

NAME	1-Tetratriacontyne	STRUCTURAL FORMULA
Mole % Pur. / Ref.	Molecular Formula $C_{34}H_{66}$ / Molecular Weight 474.868	$C_{32}H_{65}C{\equiv}CH$

Property	Value	Ref.
F.P. °C	74.	2
F.P. 100%		
B.P. °C 760 mm	472.	2
100	374.66	4
30	330.08	4
10	295.6	5
1	237.2	5
0.1	192.4	5
Press. mm t_e	1893.8	5
Density g/ml 20°C	0.8260≠	2
d^t_4 25	0.8227≠	2
30	0.8194≠	4
a	0.8392	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4608≠	2
25	1.4588≠	2
30	1.4568≠	4
"C"	0.7377	4
MR (Obs.)	157.66 ≠	2
MR (Calc.)	157.210	5
(nD-d/2)	1.0478≠	2
Dielectric	2.13	5
A (330 to 580 °C)	7.61919	4
B	2942.5	4
C	149.	5
A* (330 to 540 °C)	2.54137	5
B*	2856.8	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	528.3	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	172.02	5
BP	0.0749	5
t_e	0.0358	5
30 mm	1.1292	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	44.93	5
BP	35.70	5
t_e	32.17	5
t_e (d,e)	32.02	5
$\Delta Hv/T_e$	18.81	5
d (330 to 530 °C)	66.38	5
e	0.0650	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8895	5
t_e	0.8489	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.37	5
30	28.45	5
40	27.54	5
Parachor [P] 20°C		
30		
40		
Sugd.	1338.4	5
Exp. L.l.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 37

NAME	1-Pentatriacontyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	$C_{33}H_{67}C{\equiv}CH$
Molecular Formula	$C_{35}H_{68}$	
Molecular Weight	488.894	

Property	Value	Ref.
F.P. °C	76.	2
F.P. 100%		
B.P. °C 760 mm	479.	2
100	380.84	4
30	335.87	4
10	301.0	5
1	242.1	5
0.1	196.9	5
Press. mm t_e	1911.2	5
Density g/ml 20°C	0.8268≠	2
d^t_4 25	0.8235≠	2
30	0.8202≠	4
a	0.8400	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4612≠	2
25	1.4593≠	2
30	1.4574≠	4
"C"	0.7376	4
MR (Obs.)	162.28 ≠	2
MR (Calc.)	161.828	5
(nD-d/2)'	1.0479≠	2
Dielectric	2.13	5
A 336 to 587 °C	7.62600	4
B	2975.2	4
C	148.	5
A* 336 to 547 °C	2.55750	5
B*	2889.0	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	536.2	5

Property	Value	Ref.
dt/dP °C/mm 0.1 mm	177.23	5
BP	0.0755	5
t_e	0.0358	5
30 mm	1.1392	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	44.09	5
BP	35.02	5
t_e	31.48	5
t_e (d,e)	31.34	5
ΔHv/T_e	18.77	5
d 336 to 537 °C	65.37	5
e	0.0634	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8892	5
t_e	0.8481	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.44	5
30	28.51	5
40	27.61	5
Parachor [P] 20°C		
30		
40		
Sugd.	1377.4	5
Exp. L.1.%/wt. u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

No. 38

NAME	1-Hexatriacontyne
STRUCTURAL FORMULA	$C_{34}H_{69}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula	Molecular Weight
		$C_{36}H_{70}$	502.920

Property	Value	Ref.
F.P. °C	77.	2
F.P. 100%		
B.P. °C 760 mm	486.	2
100	387.53	4
30	342.34	4
10	307.2	5
1	247.4	5
Pressure mm 200.97°C	0.1000	5
t_e	1954.3	5
Density g/ml 20°C	0.8275≠	2
d^t_4 25	0.8242≠	2
30	0.8209≠	4
a	0.8407	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4617≠	2
25	1.4597≠	2
30	1.4577≠	4
"C"	0.7378	4
MR (Obs.)	166.92≠	2
MR (Calc.)	166.446	5
(nD-d/2)	1.0479≠	2
Dielectric	2.14	5
A (342 to 595 °C)	7.66232	4
B	3026.69	4
C	147.	5
A* (342 to 555 °C)	2.58413	5
B*	2931.19	5
K		
c		
t_k to t_x °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac, Bc, Cc (t_c °C)		
Cryos. consts. A°, B°		
t_e °C	545.40	5

Property	Value	Ref.
dt/dP °C/mm 200.97°C	175.29	5
BP	0.07565	5
t_e	0.03519	5
30 mm	1.1453	5
ΔHm cal/g		
ΔHv cal/g 200.97°C	50.77	5
30 mm	43.29	5
BP	34.37	5
t_e	30.84	5
t_e (d, e)	30.79	5
ΔHv/T_e	18.98	5
d (342 to 545 °C)	64.41	5
e	0.0618	5
d', e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 200.97°C	1.0000	5
30 mm	1.0000	5
BP	0.8890	5
t_e	0.8475	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property	Value	Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.50	5
30	28.57	5
40	27.66	5
Parachor [P] 20°C		
30		
40		
Sugd.	1416.4	5
Exp. L.I.%/wt. u. Dispersion	101. ≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid   + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	1-Heptatriacontyne	STRUCTURAL FORMULA
		$C_{35}H_{71}C{\equiv}CH$
Mole % Pur.	Ref.	Molecular Formula $C_{37}H_{72}$ · Molecular Weight 516.946

Property		Ref.
F.P. °C	79.	2
F.P. 100%		
B.P. °C 760 mm	493.	2
100	393.21	4
30	347.49	4
10	312.1	5
1	252.2	5
0.1	206.2	5
Press. mm t_e	1946.4	5
Density g/ml 20°C	0.8282≠	2
d_4^t 25	0.8249≠	2
30	0.8216≠	4
a	0.8414	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4621≠	2
25	1.4601≠	2
30	1.4581≠	4
"C"	0.7377	4
MR (Obs.)	171.56 ≠	2
MR (Calc.)	171.034	5
(nD-d/2)	1.0480≠	2
Dielectric	2.14	5
A 348 to 603 °C	7.63157	4
B	3031.0	4
C	145.	5
A* 348 to 563 °C	2.58066	5
B*	2944.0	5
K		
c		
t_k to t_x °C		
A' B' C' to °C		
A'* B'* to °C		
Ac Bc Cc to t_c °C		
Cryos. consts. A° B°		
t_e °C	553.0	5

Property		Ref.
dt/dP °C/mm 0.1 mm	176.68	5
BP	0.0767	5
t_e	0.0359	5
30 mm	1.1584	
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	42.58	5
BP	33.76	5
t_e	30.21	5
t_e (d, e)	30.13	5
ΔHv/T_e	18.90	5
d 348 to 553 °C	63.64	5
e	0.0606	5
d' e' to °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8888	5
t_e	0.8468	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v A^v to °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

Property		Ref.
f g h to °K		
f' g' h' to °K		
m n o to °K		
m' n' o' to °K		
Surface tension dynes/cm. γ 20°C	29.56	5
30	28.63	5
40	27.72	5
Parachor [P] 20°C		
30		
40		
Sugd.	1455.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in+ Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 40

NAME	1-Octatriacontyne	STRUCTURAL FORMULA
		$C_{36}H_{73}C{\equiv}CH$

Mole % Pur.	Ref.	Molecular Formula $C_{38}H_{74}$	Molecular Weight 530.972

		Ref.
F.P. °C	80.	2
F.P. 100%		
B.P. °C 760 mm	499.	2
100	398.51	4
30	352.45	4
10	316.8	5
1	256.4	5
0.1	210.1	5
Press. mm t_e	1962.3	5
Density g/ml 20°C	0.8289≠	2
d_4^t 25	0.8256≠	2
30	0.8223≠	4
a	0.8421	4
b	-0.0₃66	4
Ref. Index n_D 20°C	1.4625≠	2
25	1.4605≠	2
30	1.4585≠	4
"C"	0.7377	4
MR (Obs.)	176.21 ≠	2
MR (Calc.)	175.652	5
(nD-d/2)	1.0480≠	2
Dielectric	2.14	5
A 353 to	7.63610	4
B 610 °C	3057.7	4
C	144.	5
A* 353 to	2.59333	5
B* 570 °C	2970.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	560.0	5

		Ref.
dt/dP °C/mm		
0.1 mm	178.05	5
BP	0.0773	5
t_e	0.0359	5
30 mm	1.1669	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm		
30 mm	41.81	5
BP	33.14	5
t_e	29.59	5
t_e (d, e)	29.52	5
$\Delta Hv/T_e$	18.86	5
d 353 to	62.67	5
e 560 °C	0.0592	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8889	5
t_e	0.8466	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. γ 20°C	29.62	5
30	28.69	5
40	27.78	5
Parachor [P] 20°C		
30		
40		
Sugd.	1494.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 41

NAME	1-Nonatriacontyne			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{76}$	Molecular Weight 544.998	$C_{37}H_{75}C{\equiv}CH$

		Ref.
F.P. °C	82.	2
F.P. 100%		
B.P. °C 760 mm	505.	2
100	403.81	4
30	357.42	4
10	321.5	5
1	260.7	5
0.1	214.0	5
Press. mm t_e	1975.5	5
Density g/ml 20°C	0.8295≠	2
d_4^t 25	0.8262≠	2
30	0.8229≠	4
a	0.8427	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4628≠	2
25	1.4608≠	2
30	1.4588≠	4
"C"	0.7376	4
MR (Obs.)	180.85 ≠	2
MR (Calc.)	180.270	5
(nD-d/2)	1.0481≠	2
Dielectric	2.14	5
A 358 to	7.64056	4
B 616 °C	3084.3	4
C	143.	5
A* 358 to	2.60759	5
B* 576 °C	2996.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	566.9	5

		Ref.
dt/dP °C/mm		
0.1 mm	179.41	5
BP	0.0778	5
t_e	0.0359	5
30 mm	1.1754	5
ΔHm cal/g		
ΔHv cal/g		
0.1 mm		
30 mm	41.09	5
BP	32.53	5
t_e	28.97	5
t_e (d, e)	28.95	5
$\Delta Hv/T_e$	18.77	5
d 358 to	61.83	5
e 567 °C	0.0580	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8453	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.67	5
30	28.74	5
40	27.83	5
Parachor [P] 20°C		
30		
40		
Sugd.	1533.4	5
Exp. L. 1.%/wt.		
u. Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 42

NAME	1-Tetracontyne	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{40}H_{78}$
Molecular Weight 559.024		$C_{38}H_{77}C{\equiv}CH$

		Ref.
F.P. °C	83.	2
F.P. 100%		
B.P. °C 760 mm	512.	2
100	409.99	4
30	363.21	4
10	327.0	5
1	265.6	5
0.1	218.5	5
Press. mm t_e	1993.7	5
Density g/ml 20°C	0.8301≠	2
d_4^t 25	0.8268≠	2
30	0.8235≠	4
a	0.8433	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4632≠	2
25	1.4612≠	2
30	1.4592≠	4
"C"	0.7377	4
MR (Obs.)	185.51 ≠	2
MR (Calc.)	184.888	5
(nD-d/2)	1.0481≠	2
Dielectric	2.14	5
A 364 to 625 °C	7.64695	4
B	3117.1	4
C	142.	5
A* 364 to 585 °C	2.62122	5
B*	3028.9	5
K		
c		
t_k to t_x °C		
A' to °C		
B'		
C'		
A'* to °C		
B'*		
Ac t_c to °C		
Bc		
Cc		
Cryos. consts. A°		
B°		
t_e °C	575.0	5

		Ref.
dt/dP °C/mm 0.1 mm	181.05	5
BP	0.0784	5
t_e	0.0359	5
30 mm	1.1854	5
ΔHm cal/g		
ΔHv cal/g 0.1 mm		
30 mm	40.45	5
BP	32.01	5
t_e	28.45	5
t_e (d,e)	28.45	5
ΔHv/T_e	18.75	5
d 364 to 575 °C	61.05	5
e	0.0567	5
d' to °C		
e'		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT 0.1 mm	1.0000	5
30 mm	1.0000	5
BP	0.8881	5
t_e	0.8449	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to °C		
A^v		
(B^v)		
(A^v)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. γ 20°C	29.72	5
30	28.79	5
40	27.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	1572.4	5
Exp. L.1.%/wt.		
u.		
Dispersion	101.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

INDEX

In PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS-II;
Advances in Chemistry; American Chemical Society: Washington, DC, 1961.

N

O

P

T

U

V